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MINOLTA

User Manual

The essentials of imaging www.minolta.com

Pi4700e Printer Controller

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Limited Software Warranty

For the USA and Canada Users

Limited Warranty

Minolta warrants that the software will perform in accordance with the accompanying written materials for a period of (90) ninety days from the date of purchase. Minolta does not warrant that the operation of the program will meet your requirements. This limited warranty gives you specific legal rights. You may have others, which vary from state/jurisdiction to state/jurisdiction.

Purchase Remedies

Minolta's entire liability and your exclusive remedy with respect to the software shall be at Minolta's option either, repair or replacement of the software. The software must be returned to Minolta with a copy of your proof of purchase. The Limited Warranty is void if failure of the software has resulted from accident, abuse, or misapplication. Any replacement software will be warranted for the remainder of the original warranty period or (30) thirty days, whichever is longer.

The remedies provided herein are customer's sole and exclusive remedies. In no event shall Minolta Corporation be liable for any lost profits, direct, indirect, special, incidental, or consequential damages, whether based on contract, tort, or any other legal theory.

Minolta Network Card Warranty

Warranty Term

Minolta Network Cards have a (1) One Year Warranty. The Network Card must be returned to Minolta for repair or replacement at Minolta's discretion.

Warranty Coverage

Minolta Corporation warrants this product to be free from defects in workmanship and materials for a period of one year from the date of receipt of the unit. If the unit fails to function as written in the User's manual, Minolta will repair or replace the unit at no charge. Minolta will ship at their expense an exchange unit overnight to replace the defective unit.

The remedies provided herein are the customer's sole and exclusive remedies. In no event shall Minolta Corporation be liable for any lost profits, direct or indirect, special, incidental, or consequential damages, whether based on contract, tort, or other legal history.

User Instructions

For the U.S.A. Users

FCC Part 15-Radio Frequency Devices

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.
Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

WARNING
The design and production of this unit conform to FCC Regulations, and any changes or modifications must be registered with the FCC and are subject to FCC control. Any changes made by purchaser or user without first contacting the manufacturer will be subject to penalty under FCC regulations.

FCC-F02

This device must be used with shielded interface cables. The use of non-shielded cables is likely to result in interference with radio communications and is prohibited under FCC rules.

For Canada Users

Interference-Causing Equipment Standard (ICES-003 Issue 3)

This Class A digital apparatus complied with Canadian ICES-003
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

IC-F03

For European Users

CE Marking (Declaration of Conformity)

This product complies with the following EU directives:
89/336/EEC, 73/23/EEC and 93/68/EEC directives.
This declaration is valid for the area of the European Union.

This device must be used with shielded interface cables. The use of non-shielded cables is likely to result in interference with radio communications and is prohibited under EU directives.

For Users of the Class B regulation's countries

This device must be used with shielded interface cables. The use of non-shielded cables is likely to result in interference with radio communications and is prohibited under CISPR 22 rules and local rules.

For Users except the Class B regulation's countries

WARNING
This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

This device must be used with shielded interface cables. The use of non-shielded cables is likely to result in interference with radio communications and is prohibited under CISPR 22 rules and local rules.

Welcome

Congratulations on your selection of Minolta Pi4700e printer controller and Network Interface Card for Pi4700e.

This User Manual explains how to run print cycles on the machine, to which the controller is connected. It also provides information about how to setup the Network Interface Card and operate the Digital Copier in a network environment. First read this manual carefully and thoroughly; then, keep it close at hand so you can refer to it whenever it becomes necessary.

Some of the screens shown in this manual may look different from what you will view in actual applications.

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1 Before Using the Printer Driver

1.1 Features of the Controller

The controller is an image controller designed to use the machine as a printer, allowing you to print documents directly to the machine from a computer to which the controller is connected. The printer driver, which is used during printing, is equipped with various functions that make the most out of the features of the machine. They enable you to use the same functions as those offered by the machine. When actually running a print cycle, you can specify various functions of the machine on your computer screen.

Note

When using the controller, be sure to set the machine to the On Line state.

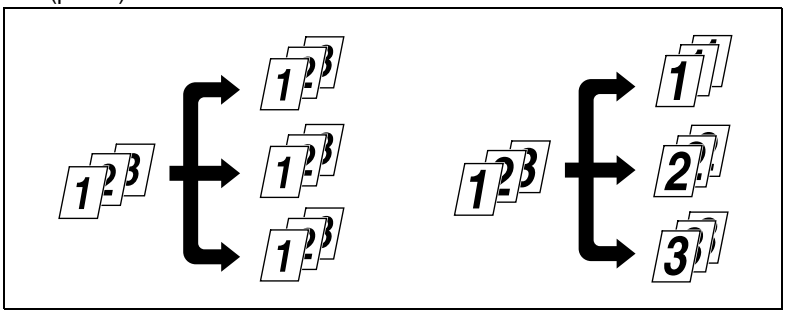
Some functions offered by the machine cannot be combined, such as Staple and Hole-Punch, and some others may not be used because of a paper size involved. The functions that cannot be selected appear dimmed.

Further, if functions that are incompatible with each other are specified, the Conflicts dialog box will appear, prompting you to change the settings. When this dialog box appears, check the details and reselect the functions to ensure function compatibility.

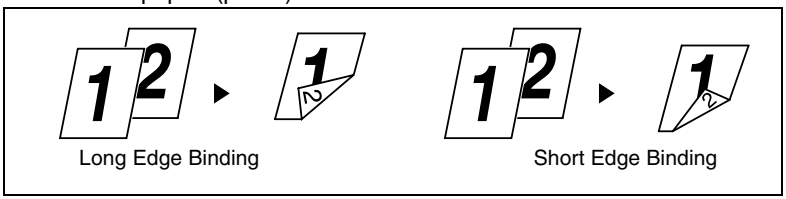
Some settings, which are defied by the machine for the restricted combinations of different functions, can at times be accepted by the printer driver. If a print command is issued from the personal computer with such settings made, the machine does not produce the output correctly or abandons the job to produce nothing. Make sure that you make correct settings.

Various Printing Functions

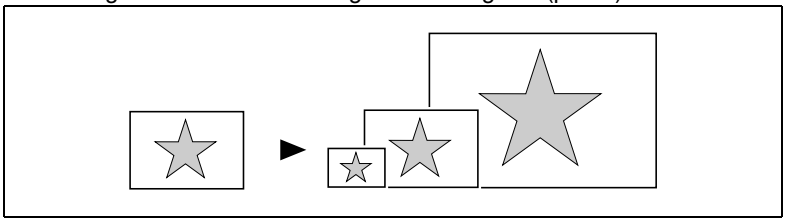
- Makes prints that are sorted into complete sets of the originals or grouped into uncollated groups, each containing prints of one original. (p. 7-4)



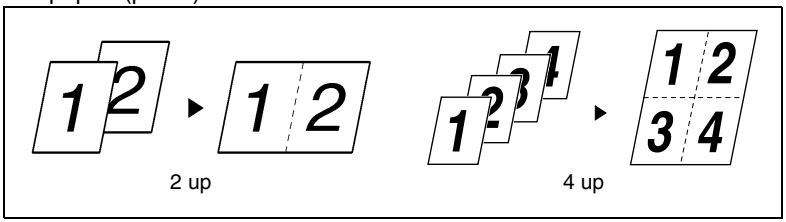
- Prints two pages of originals on both front and back sides of a single sheet of paper. (p. 7-2)



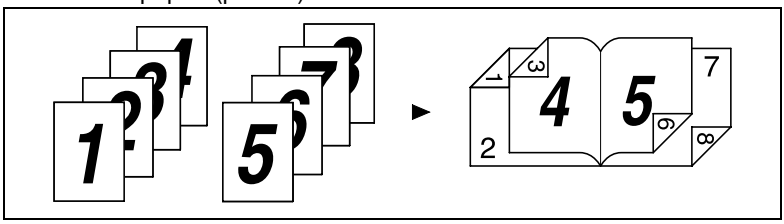
- Enlarges or reduces the image on the original. (p. 7-8)



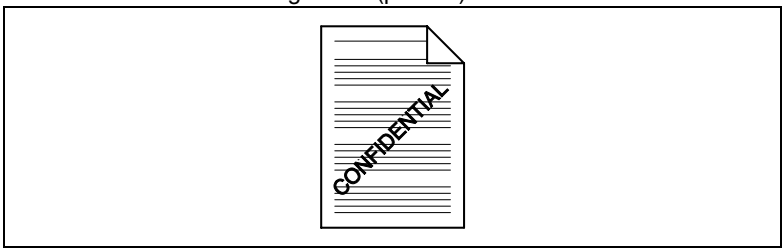
- Prints two pages or four pages of originals on a single sheet of paper. Maximum of 16 pages of originals can be printed on a single sheet of paper. (p. 7-6)



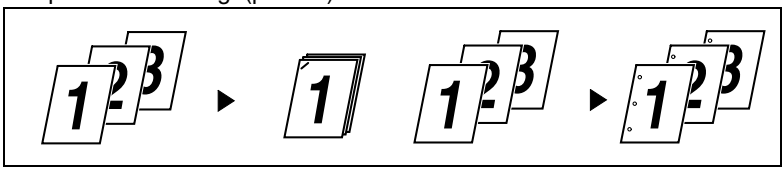
- Prints four pages of originals to both front and back sides of a single sheet of paper. (p. 7-12)



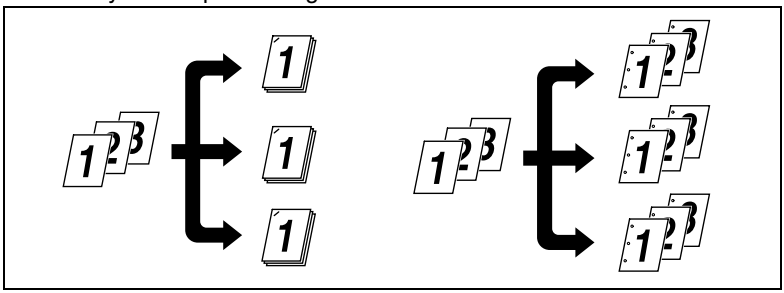
- Places text in the background. (p. 7-10)



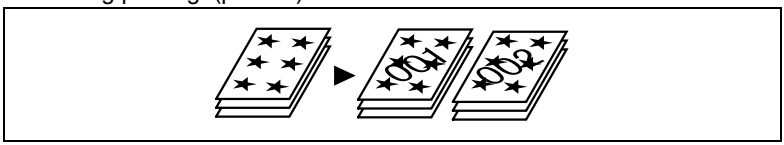
- Makes prints of complete sets of the originals, stapled together or punched for filing. (p. 4-13)



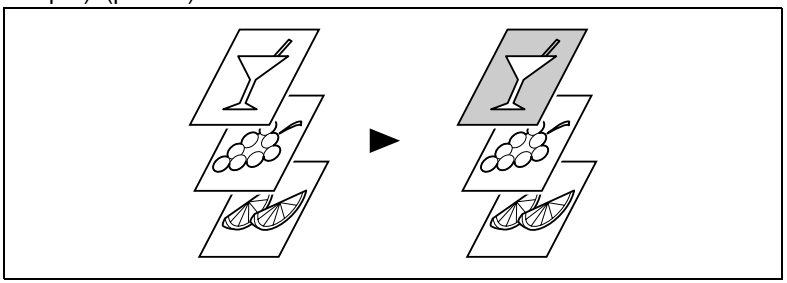
By combining Collate with other finishing capabilities, you can make complete sets of documents for immediate delivery without having to do any further processing.



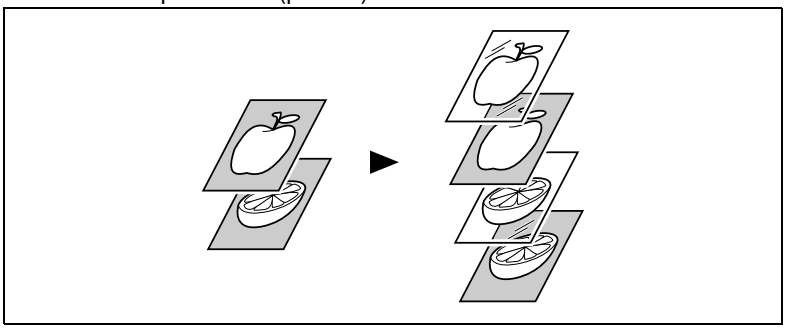
- Adds a reference number (Distribution Number) to each document set during printing. (p. 7-14)



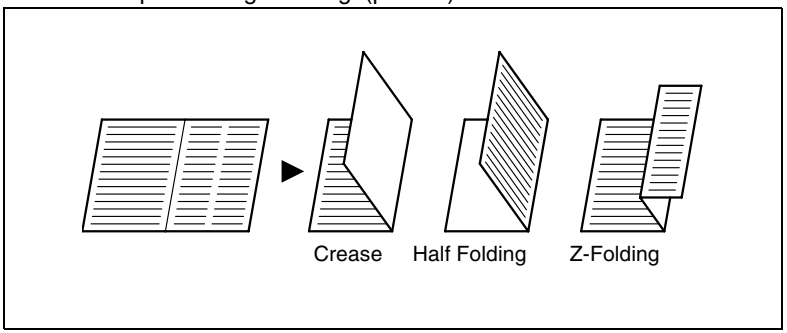
- Prints only the cover on a different type of paper (such as colored paper). (p. 7-20)



- Capable of printing on OHP transparencies. You can also insert interleaves, either blank or printed with the same contents as those on the OHP transparencies. (p. 7-18)



- Folds copies during finishing. (p. 4-13)



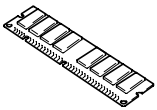
Administrative Functions

- Different accounts can be managed for printing records, just as when using the machine as a copier.
- Printing of confidential documents may be withheld until a legitimate password is entered on the machine.

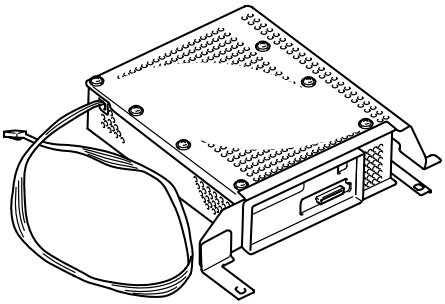
1.2 Configuration

The controller may be configured with the following options.

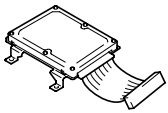
- Memory (64MB/128MB, Option)
  Expands the memory capacity of Pi4700e.



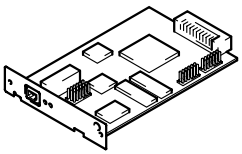
- Controller
  Allows you to use the machine as a printer controlled by your personal computer.



- Hard Disk Drive (Option)
  For downloading Mac PS fonts and storing them. Stores the Scan to HDD data.



- NIC Board (Option)
  Allows you to use the machine as a printer in a network environment.



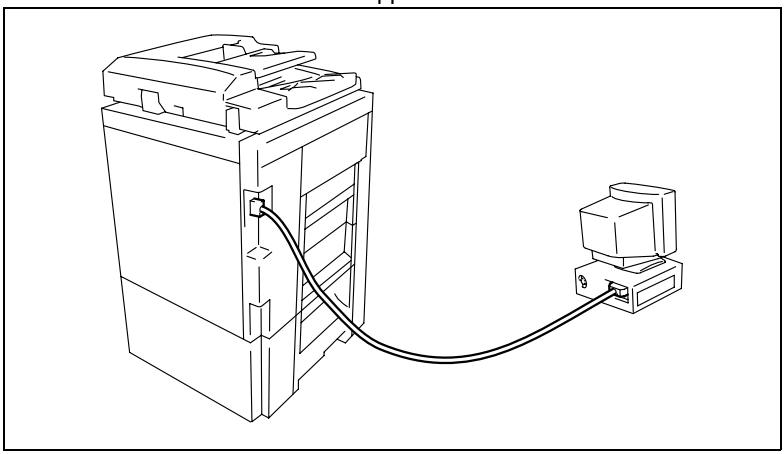
Note

The NIC Board must be mounted to use the scanner functions.

1.3 Connecting the Controller

The controller is installed inside the machine. The installation procedures are to be performed by service personnel.

The controller is connected to the computer by a printer cable or network cable. Power to the controller is supplied from the machine.



Tip

If you cannot print from your computer, make sure that the printer cable or network cable is connected to the corresponding connectors.

1.4 Settings Made on the Machine

The following functions must be set on the machine using its Utility Mode, as they relate to the controller.

Priority Device

Select the priority use of the machine, either as a copier or printer.

- Copier: The machine is used as a copier.
  The machine starts the print cycle only after it has received the entire data of a particular print job.
  The machine can be used for copying, since it starts printing only after it has received the entire data of the job for printing. This means that more time is available to you for copying, but you have to wait for a longer time before a particular print job is done.
- Printer: The machine is used as a printer.
  The machine starts the print cycle before it completes receiving the entire data of a particular print job.
  On receiving the data for one page, the machine starts printing, accepting no other job for copying. This means that less time is available to you for copying, but you do not have to wait long before a particular print job is done.

On Line / Ready

- On Line key
  This function is the same as that available in ordinary printers as On Line/Off Line.
  Select On Line normally. A lit lamp indicates that the machine is in the On Line mode.
- Ready Lamp
  Data can be transferred while this lamp stays lit up. The lamp remains blinking while data is being transferred.

1.5 Installing the Printer Drivers

To make 100% use of the functions offered by the machine mounted with the controller, install the attached printer drivers in your computer.

The controller is furnished with the following printer drivers:

- PCL6 printer driver for Windows 95
- PCL6 printer driver for Windows 98/Me
- PCL6 printer drive for Windows NT 4.0
- PCL6 printer driver for Windows 2000/XP
- PS printer driver for Windows 95/98/Me
- PS printer driver for Windows NT 4.0
- PS printer driver for Windows 2000/XP
- PPD file for Macintosh
- PPD Plugin for Mac OS X
- PS print utility for Linux (Redhat, SuSE, Turbo, Open)

Install the printer driver suitable for the operating system that runs on your computer. For installation procedures, see the relevant page as detailed below:

- Installing the Windows printer driver:
  Windows 95/98/Me (p. 2-1)
  Windows 2000/XP (p. 2-8)
  Windows NT 4.0 (p. 2-15)
- Installing the Macintosh PPD file and PPD Plugin file:
  See “6.1 Installing the printer driver” on page 6-1.
- Installing the Linux print utility:
  See “5.1 Installing the printer driver” on page 5-1.

2 Installing the Printer Driver

This chapter describes the procedure for installing the printer driver on a Windows operating system. For details on installation for Linux, refer to chapter 5. For details on installation for a Macintosh, refer to chapter 6.

2.1 Windows 95/98/Me

Operating Environment

This section explains the required environment for the printer driver.

Before installing the printer driver, check that your computer meets the following requirements. If it doesn't, the printer driver may not function properly.

Personal computer		IBM PC or compatible with Pentium 200MHz or higher CPU
Operating system		Windows 95 (English), Windows 98 (English) or Windows Me (English)
Memory		64MB or more
I/O interface	Parallel	Centronics interface (Conforming to IEEE1284)
	Network	10/100BaseT (UTP)
Free space on hard disk		10MB or more (PCL6) 2MB or more (PS)

- Windows 2000/XP
  For the operating environment and installation procedure for the Windows 2000/XP printer driver, see page 2-8.
- Windows NT 4.0
  For the operating environment and installation procedure for the Windows NT 4.0 printer driver, see page 2-15.

Installing

This section explains the installation procedure for the Windows 98 printer driver.

...

Note

Before starting to install the printer driver, be sure first to quit all other applications.

...

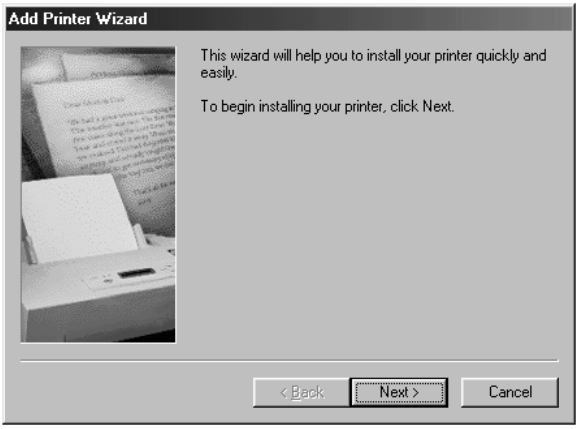
Tip

The following procedure assumes that the machine is a Digital Copier and that the printer driver is PCL6: Read the specific proper names accordingly if the machine is a model other than the Digital Copier and if, for example, the OS is Windows 95 and the printer driver is PS.

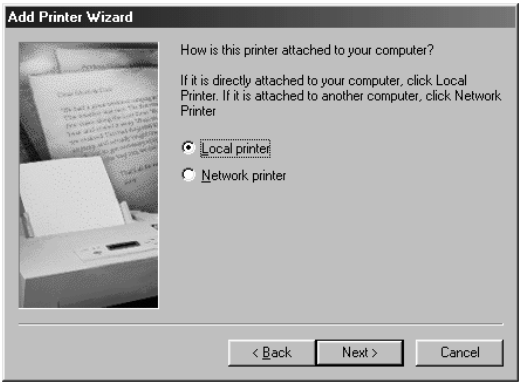
1 Click the **Start** button. From the menu that appears, select **Settings**, then click **Printers**.

2 The Printers window will appear. Double-click the **Add Printer** icon.

3 The Add Printer Wizard will appear. Click the **Next>** button.



4 A window will appear, asking how the printer is to be connected. If your computer is directly connected to the machine, select **Local printer** and then click the **Next>** button.



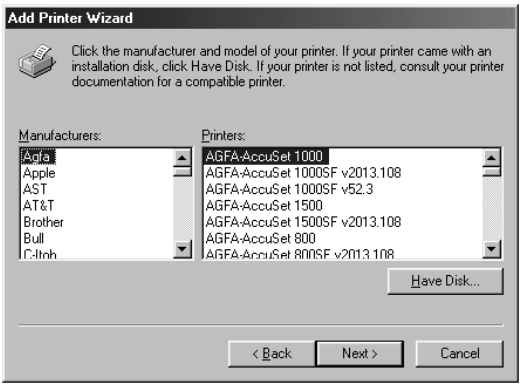
...

Note

When installing the printer driver in a computer connected to the machine via a network, be sure to consult the network administrator.

*This is a request to be made of the network administrator. To install the printer driver in a computer connected to a network, select **Network printer** and click the **Next>** button. Then, a window will appear prompting you to enter the network path: Enter the path.*

5 A window will appear, prompting you to select the manufacturer and model of your printer. Click the **Have Disk...** button on the lower right part of the screen.



6 The Install From Disk dialog box will appear. Install the controller driver CD-ROM that is included with the controller in the CD-ROM drive of your computer.

7 Click the **Browse** button, select the file corresponding to the type of printer driver to be installed and the operating system being used, and then click the **OK** button.

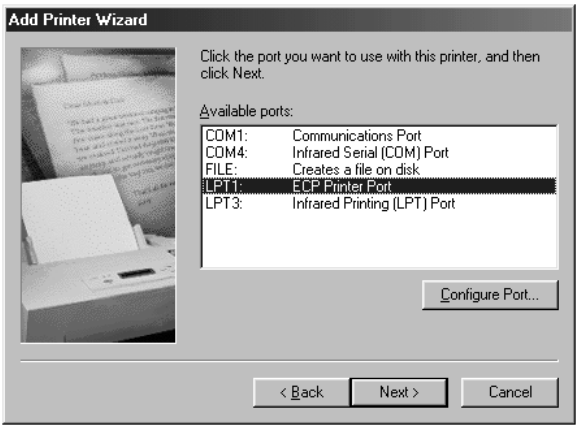
8 A **Printers** list appears.
Select the driver to be installed and click the **Next>** button.

...

Tip

PS driver is different for each model: Select according to model of the machine used.

9 A window that prompts you to select the port will appear. Select the port (normally **LPT:**) to which the printer cable has been connected, then click the **Next>** button.



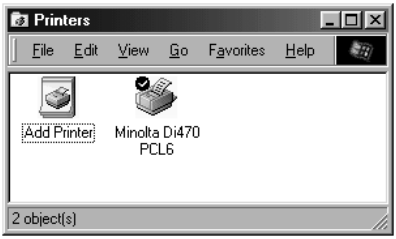
10 A window that asks you to confirm the printer name will appear. Check the printer name. If you want to designate this printer as the default printer, select **Yes**.
Click the **Next>** button.

11 A screen that allows you to select printing of a test page will appear. If you want to print a test page, select **Yes (recommended)**. If you elect not to, select **No**. It is recommended that a test page be printed to ensure that the printer driver has been installed properly. Now, click the **Finish** button.

12 Installation will start.

When all the files have been copied from the CD-ROM, the corresponding icon will be added to the Printers window.

This completes the installation.



Making General Settings Before Using the Printer

The printer driver requires setting of items that are common to all print jobs, including the port to which the printer cable is connected and optional devices configured with the machine. These settings must be made using properties dialog box available from the Properties command after the printer driver has been installed or whenever the operating environment is changed.

The most common settings were made when the printer driver was installed, meaning that you do not usually bother to change them. Some items must, however, be changed in the following cases.

Cases where changes are necessary	Applicable property tab
You want to add a comment to distinguish the printer from others	General
The computer's connecting port has been changed You want to change the conditions for the display of a timeout error You want to designate a port to which the machine is connected via a network (this setting must be made on a computer connected to the machine via a network)	Details
This setting is not related to printing.	Color Management
You want to share the machine with other computers connected to the same network (this setting must be made on the computer directly connected to the machine)	Sharing

For details of "Device Options Setting tab", see page 4-2.

Displaying a Properties dialog box

There are two different steps to take to display a properties dialog box. The contents of a particular properties dialog box slightly differ depending on how you access it. Select the appropriate one according to your need.

(1) To display a properties dialog box from the Printers window

(2) To display a properties dialog box from an application menu

Below are the detailed procedures for each approach.

Displaying a Properties dialog box from the Printers window

1 Click the **Start** button and select **Settings**. Then, click **Printers**.

2 Right-click the appropriate printer icon (ex. Minolta Di470 PCL6).

3 Select **Properties** from the menu that will appear. This shows the properties dialog box.

It allows you to set the environment in which you will use the printer. The settings made through this method are valid in all applications.

Displaying a Properties dialog box from an Application Menu

As an example, the procedure for the PCL6 printer driver is described below.

1 Select **Print...** from the **File** menu of the application.

2 Make sure that the **Name** of the **Printer** is **Minolta Di470 PCL6**: If **Minolta Di470 PCL6** is not listed, click ▼ and, from the menu that will then appear, select **Minolta Di470 PCL6**.

3 Click the **Properties** button. This shows the properties dialog box.

This method allows you to set the number of copies and paper for each document.

Note that the settings made on the properties dialog box accessed through the application are valid only for that particular application.

Tip

To set the Device Options Setting, which need not be changed unless device is changed, open it from the Printers window to set.

To show a properties dialog box other than Setup, click the corresponding tab located on the top part of the screen.

Note

The steps to display a properties dialog box may be different depending on the application. Follow the correct procedure according to the application. The procedure above is based on the application WordPad.

2.2 Windows 2000/XP

Operating Environment

This section explains the required environment for the printer driver.

Before installing the printer driver, check that your computer meets the following requirements. If it doesn't, the printer driver may not function properly.

Personal computer		IBM PC or compatible with Pentium 200MHz or higher CPU
Operating system		Windows 2000 (English) or Windows XP (English)
Memory		64MB or more
I/O interface	Parallel	Centronics interface (Conforming to IEEE1284)
	Network	10/100BaseT (UTP)
Free space on hard disk		10MB or more (PCL6) 2MB or more (PS)

- Windows 95/98/Me
  For the operating environment and installation procedure for the Windows 95/98/Me printer driver, see page 2-1.
- Windows NT 4.0
  For the operating environment and installation procedure for the Windows NT 4.0 printer driver, see page 2-15.

Installing

This section explains the installation procedure for the Windows 2000/XP printer driver.

Note

When starting up the operating system, log in with administrator privileges.

Before starting to install the printer driver, be sure first to quit all other applications.

Tip

The following procedure assumes that the machine is a Digital Copier and that the printer driver is PCL6: Read the specific proper names accordingly if the machine is a model other than the Digital Copier and if, for example, the OS is Windows XP and the printer driver is PS.

1 Click the **Start** button. From the menu that appears, select **Settings**, then click **Printers**.

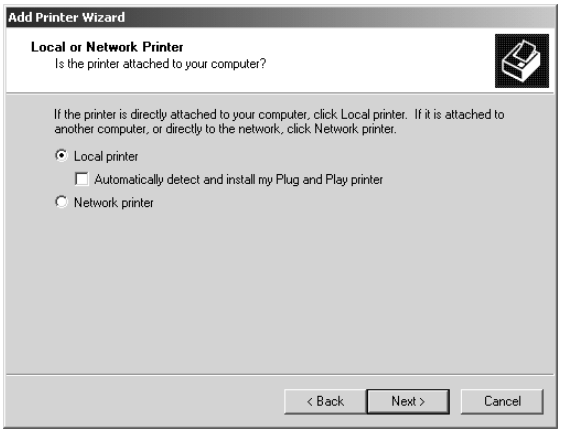
2 The Printers window will appear. Double-click the **Add Printer** icon.

3 Start the Add Printer Wizard.
Click the **Next>** button.

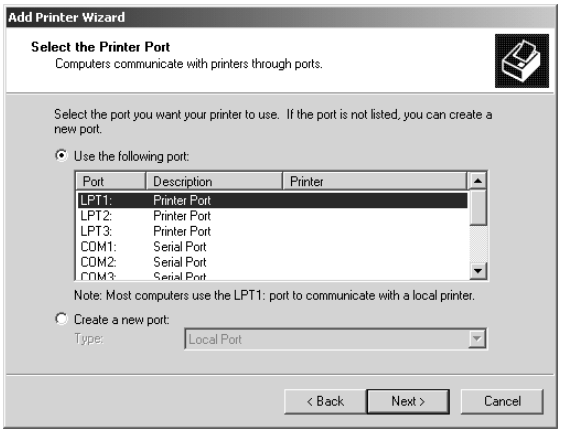
4 A screen that allows you to select the type of connection made of the printer will appear. If the printer is directly connected to the computer, select **Local Printer** and click the **Next>** button.

Note

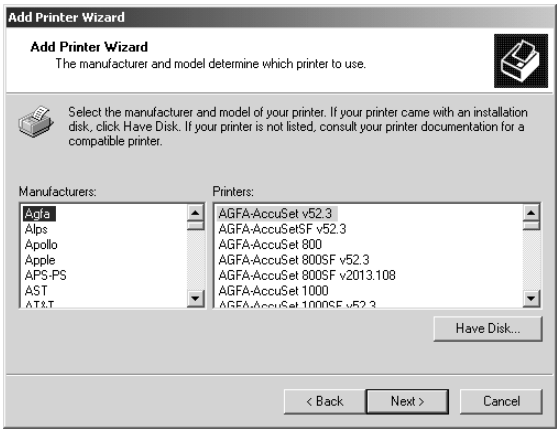
When installing the printer driver in a computer connected to the machine via a network, be sure to consult the network administrator.



5 A window the prompts you to select the port will appear. Select the name of the port to be used and click the **Next>** button.



6 A window will appear, prompting you to select the manufacturer and model of your printer. Click the **Have Disk...** button on the lower right part of the screen.



7 The Install From Disk dialog box will appear. Install the controller driver CD-ROM that is included with the controller in the CD-ROM drive of your computer.

8 Click the **Browse** button, select the file corresponding to the type of printer driver to be installed and the operating system being used, and then click the **OK** button.

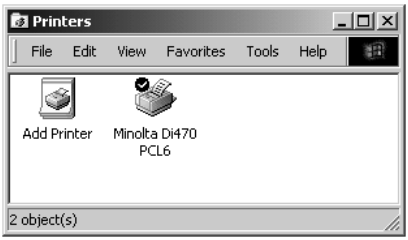
9 A **Printers** list appears.
Select the driver to be installed and click the **Next>** button.

10 A window that asks you to confirm the printer name will appear. Check the printer name. If you want to designate this printer as the default printer, select **Yes**.
Click the **Next>** button.

11 Follow the instructions that appears on your computer screen.

12 As the last step, click the **Finish** button.

13 Installation will start.
When all the files have been copied from the CD-ROM, the corresponding icon will be added to the Printers window. This completes the installation.



Making General Settings Before Using the Printer

The printer driver requires setting of items that are common to all print jobs, including the port to which the printer cable is connected and optional devices configured with the machine. These settings must be made using property sheets available from the Properties command after the printer driver has been installed or whenever the operating environment is changed.

The most common settings were made when the printer driver was installed, meaning that you do not usually bother to change them. Some items must, however, be changed in the following cases.

Cases where changes are necessary	Applicable property tab
You want to add a comment to distinguish the printer from others	General
You want to share the machine with other computers connected to the same network (this setting must be made on the computer directly connected to the machine)	Sharing
The computer's connecting port has been changed You want to change the conditions for the display of a timeout error You want to designate a port to which the machine is connected via a network (this setting must be made on a computer connected to the machine via a network)	Ports
You want to restrict use condition of printer. You want to change settings in spool condition. You want to change OS-dependent settings.	Advanced
This setting is not related to printing.	Color Management
You want to restrict access to the machine You want to check the accounts of the machine users	Security
This setting is not related to printing.	Processing

For the details of “Device Options Setting tab”, see page 4-2.

Displaying a Properties dialog box

You have two different steps to take to display a properties dialog box. The contents of a particular properties dialog box slightly differ depending on how you access it. Select the appropriate one according to your need.

(1) To display a properties dialog box from the Printers window

(2) To display a properties dialog box from an application menu

Below are the detailed procedures for each approach.

Displaying a Properties dialog box from the Printer Folder

1 Click the **Start** button and select **Settings**. Then, click **Printers**.

2 Click the appropriate printer icon (ex. Minolta Di470 PCL6).

3 <To display the General dialog box>
Click **Properties** from the **File** menu.

4 <To display Printing Preferences dialog box>
Click **Printing Preferences...** from the **File** menu.

It allows you to set the environment in which you will use the printer. The settings made through this method are valid in all applications.

Displaying a Properties dialog box from an Application Menu

As an example, the procedure for the PCL6 printer driver is described below.

1 Select **Print...** from the **File** menu of the application.

2 Make sure that the **Select Printer** of the **General** is **Minolta Di470 PCL6**: If **Minolta Di470 PCL6** is not listed, click ▼ and, from the menu that will then appear, select **Minolta Di470 PCL6**.

This method allows you to set the number of copies and paper for each document.

Note that the settings made on the properties dialog box accessed through the application are valid only for that particular application.

Tip

To set the Device Options Setting, which need not be changed unless device is changed, open it from the Printers window to set.

To show a properties dialog box other than Setup, click the corresponding tab located on the top part of the screen.

Note

The steps to display a properties dialog box may be different depending on the application. Follow the correct procedure according to the application. The procedure above is based on the application WordPad.

With PostScript printer driver, the contents are different between when the properties dialog box is accessed from Print Manager and when it is accessed from an application.

2.3 Windows NT 4.0

Operating Environment

This section explains the required environment for the printer driver.

Before installing the printer driver, make sure that your computer meets the following requirements. If it doesn't, the printer driver may not function properly.

Personal computer		IBM PC or compatible with Pentium 200MHz or higher CPU
Operating system		Windows NT 4.0 (English)
Memory		64MB or more
I/O interface	Parallel	Centronics interface (Conforming to IEEE1284)
	Network	10/100BaseT (UTP)
Free space on hard disk		10MB or more (PCL6) 2MB or more (PS)

- Windows 95/98/Me
  For the operating environment and installation procedure for the Windows 95/98/Me printer driver, see page 2-1.
- Windows 2000/XP
  For the operating environment and installation procedure for the Windows 2000/XP printer driver, see page 2-8.

Installation

This section explains the installation procedure for the Windows NT 4.0 printer driver.

Note

When starting up the operating system, log in with administrator privileges.

Before starting to install the printer driver, be sure first to quit all other applications.

Tip

The following procedure assumes that the machine is a Digital Copier and that the printer driver is PCL6: Read the specific proper names accordingly if the machine is a model other than the Digital Copier and if, for example, the printer driver is PS.

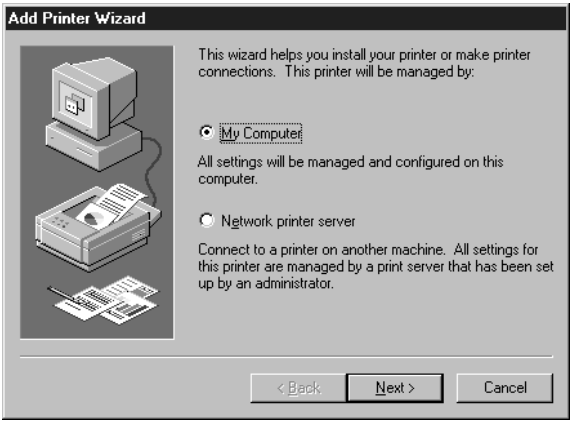
1 Click the **Start** button. From the menu that appears, select **Settings**, then click **Printers**.

2 The Printers window will appear. Double-click the **Add Printer** icon.

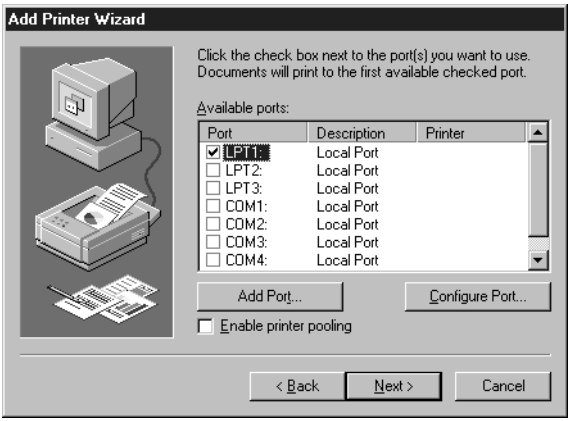
3 Start the Add Printer Wizard. If the printer is directly connected to the computer, select **My Computer** and click the **Next>** button.

Note

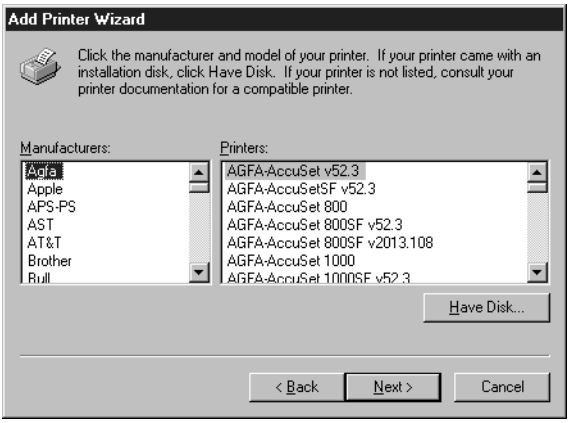
When installing the printer driver in a computer connected to the machine via a network, be sure to consult the network administrator.



4 A window that prompts you to select the port will appear. Select the name of the port to be used and click the **Next>** button.



5 A window will appear, prompting you to select the manufacturer and model of your printer. Click the **Have Disk...** button on the lower right part of the screen.



6 The Install From Disk dialog box will appear. Install the controller driver CD-ROM that is included with the controller in the CD-ROM drive of your computer.

7 Click the **Browse** button, select the file corresponding to the type of printer driver to be installed and the operating system being used, and then click the **OK** button.

8 A **Printers** list appears.
Select the driver to be installed and click the **Next>** button.

9 A window that asks you to confirm the printer name will appear. Check the printer name. If you want to designate this printer as the default printer, select **Yes**.
Click the **Next>** button.

10 Follow the instructions that appears on your computer screen.

11 As the last step, click the **Finish** button.

12 Installation will start.
When all the files have been copied from the CD-ROM, the corresponding icon will be added to the Printers window. This completes the installation.

Making General Settings Before Using the Printer

The printer driver requires setting of items that are common to all print jobs, including the port to which the printer cable is connected and optional devices configured with the machine. These settings must be made using property dialog box available from the Properties command after the printer driver has been installed or whenever the operating environment is changed.

The most common settings were made when the printer driver was installed, meaning that you do not usually bother to change them. Some items must, however, be changed in the following cases.

Cases where changes are necessary	Applicable property tab
You want to add a comment to distinguish the printer from others	General
The computer's connecting port has been changed You want to change the conditions for the display of a timeout error You want to designate a port to which the machine is connected via a network (this setting must be made on a computer connected to the machine via a network)	Ports
You want to specify a time frame for the machine operation	Scheduling
You want to share the machine with other computers connected to the same network (this setting must be made on the computer directly connected to the machine)	Sharing
You want to restrict access to the machine You want to check the accounts of the machine users	Security
This setting is not related to printing.	Pressing

For the details of “Device Options Setting tab”, see page 4-2.

Displaying a Properties dialog box

There are two different steps to take to display a properties dialog box. The contents of a particular properties dialog box slightly differ depending on how you access it. Select the appropriate one according to your need.

(1) To display a properties dialog box from the Printers window

(2) To display a properties dialog box from an application menu

Below are the detailed procedures for each approach.

Displaying a Properties dialog box from the Printer Folder

1 Click the **Start** button and select **Settings**. Then, click **Printers**.

2 Click the appropriate printer icon (ex. Minolta Di470 PCL6).

3 <To display the General tab>
Select **Properties** from the **File** menu.

4 <To display Printing Preferences dialog box>
Click **Document Defaults...** from the **File** menu.

It allows you to set the environment in which you will use the printer. The settings made through this method are valid in all applications.

Displaying a Properties dialog box from an Application Menu

As an example, the procedure for the PCL6 printer driver is described below.

1 Select **Print...** from the **File** menu of the application.

2 Make sure that the **Name** of **Printer** is **Minolta Di470 PCL6**: If **Minolta Di470 PCL6** is not listed, click ▼ and, from the menu that will then appear, select **Minolta Di470 PCL6**.

3 Click the **Properties** button. This shows the properties dialog box.

This method allows you to set the number of copies and paper for each document.

Note that the settings made on the properties dialog box accessed through the application are valid only for that particular application.

Tip

To set the Device Option Setting, which need not be changed unless device is changed, open it from the Printers window to set.

To show a properties dialog box other than Setup, click the corresponding tab located on the top part of the screen.

Note

The steps to display a properties dialog box may be different depending on the application. Follow the correct procedure according to the application. The procedure above is based on the application WordPad.

With PostScript printer driver, the contents are different between when the properties dialog box is accessed from Print Manager and when it is accessed from an application.

3 Network Settings

3.1 Introduction

Though this Network Card does not support NetBEUI protocol, it supports TCP/IP and IPX/SPX, which provides plenty of connection flexibility for the Windows computer.

This chapter consists of the sections listed below.

(1) Specifying the IP address from the printer's touch panel

...

Note

In order to specify the IP address in a TCP/IP environment, the BootP and Map Utility are used in addition to entering the address from the printer's touch panel. For details, refer to "8.7 Using the utility software" on page 8-28.

(2) Using the printing functions

Windows 95/98/Me

- Peer-to-peer printing with TCP/IP
  See "3.3 Peer-to-Peer Printing with TCP/IP" on page 3-5.
- Peer-to-peer printing with IPX/SPX
  See "3.5 Peer-to-Peer Printing with IPX/SPX" on page 3-12.

Windows NT 4.0

- Peer-to-peer printing with TCP/IP
  See "3.3 Peer-to-Peer Printing with TCP/IP" on page 3-5.
- LPR printing
  See "3.7 LPR Printing" on page 3-17.

Windows 2000/XP

- LPR printing
  See "3.7 LPR Printing" on page 3-17.
- IPP printing
  See "3.8 IPP Printing" on page 3-21.

(3) Specifying network settings from PageScope Light

A Windows 95/98/Me network printer can be used by going through a Novell NetWare or Windows 2000/NT server. This Network Card, however, can be configured with its bundled peer-to-peer printing programs for peer-to-peer printing without a server. Peer-to-peer printing can be performed using TCP/IP or IPX/SPX.

There are two ways you can print from Windows NT 4.0 with TCP/IP: using the bundled IP Peer-to-Peer Printing Program, and using the Windows NT standard LPR printing function.

There are two ways you can print from Windows 2000/XP with TCP/IP: using the Windows 2000/XP standard LPR printing function, and using the Windows 2000/XP standard IPP printing function.

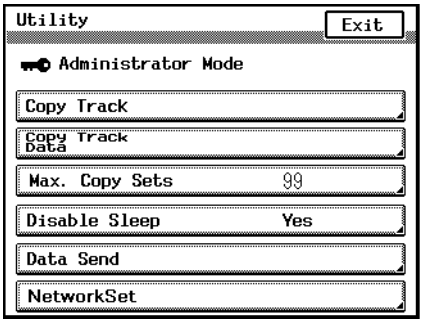
3.2 Specifying the IP Address From the Printer's Touch Panel

Setting procedure

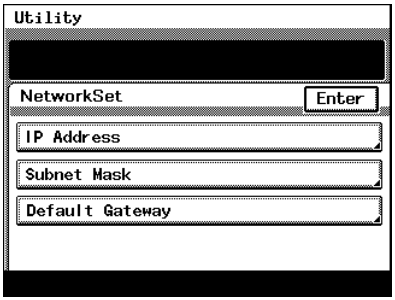
1 Press the [Utility] key.

2 Touch [Administrator Mode] and input the Administrator code.

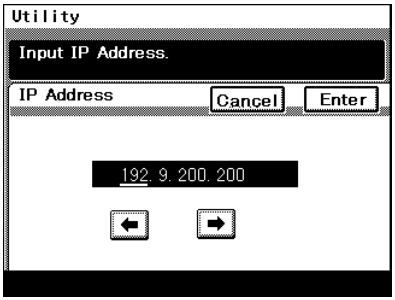
3 Touch [NetworkSet].



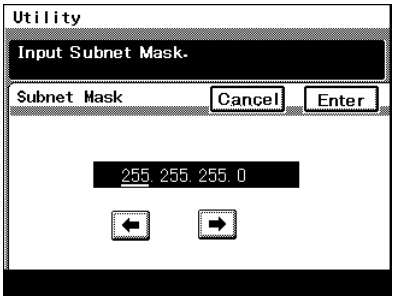
4 Touch [IP Address].



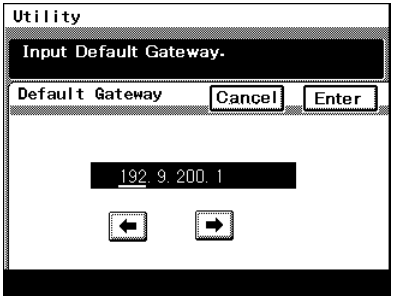
5 With the keypad in the operation panel, type in the IP address, and then touch [Enter].



6 With the keypad in the operation panel, type in the subnet mask, and then touch [Enter].



7 With the keypad in the operation panel, type in the default gateway, and then touch [Enter].



8 In order to activate the address settings, turn the digital copier off, then on again.

...

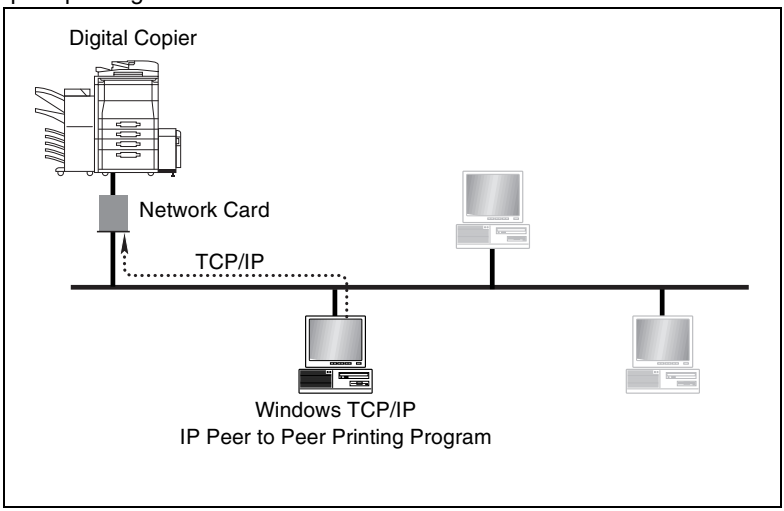
Note

The specified IP address cannot be confirmed from the copier panel.

Confirm it from the network configuration sheet.

3.3 Peer-to-Peer Printing with TCP/IP

Use the bundled IP Peer-to-Peer Printing Program for TCP/IP peer-to-peer printing under Windows.



Configuration Procedure (Windows 95/98/Me)

1 Install TCP/IP under Windows.
Refer to the applicable Windows documentation for more information.

2 Assign the IP parameters.
See “3.2 Specifying the IP Address From the Printer’s Touch Panel” (p. 3-2) for more information.

3 Install the IP Peer-to-Peer Printing Program.
Use the IP Peer-to-Peer Printing Program for peer-to-peer printing.
See “3.4 Peer-to-Peer Printing Program (Windows)” (p. 3-8) for more information.

4 Use the procedure below to install the printer.

Installing the printer (Windows 95/98/Me)

1 On the **Start** menu, point to **Settings** and then click **Printers**.

2 Double-click **Add Printer** and install the printer. Make the new printer the default printer.
See “2 Installing the Printer Driver” (p. 2-1) for details about how to install it.

3 Right-click the new printer icon and select **Properties** from the menu.

4 Display the **Details** tab.

5 Click the **Print to the following port** box and then select the port added by the IP Peer-to-Peer Printing Program.

6 Click the **Apply** button of the Properties dialog box.

7 Display the **General** tab and print a test page.

8 If the test prints normally, complete the procedure by clicking **OK** to close the Properties dialog box.

After you finish installing a printer with the above procedure, you can use it just as you would any standard local printer. The printer can also be used as a network printer by other Windows computers on your network whose Windows 95/98/Me systems are configured the same way as described above.

Configuration Procedure (Windows NT 4.0)

1 Install TCP/IP under Windows NT 4.0.
Refer to the applicable Windows documentation for more information.

2 Assign the IP parameters.
See “3.2 Specifying the IP Address From the Printer’s Touch Panel” (p. 3-2) for more information.

3 Install the IP Peer-to-Peer Printing Program.
Use the IP Peer-to-Peer Printing Program for peer-to-peer printing.
See “3.4 Peer-to-Peer Printing Program (Windows)” (p. 3-8) for more information.

4 Use the procedure below to install the printer.

Installing the printer (Windows NT 4.0)

1 On the **Start** menu, point to **Settings** and then click **Printers**.

2 Double-click **Add Printer** and install the printer. Make the new printer the default printer.
See “2 Installing the Printer Driver” (p. 2-1) for details about how to install it.

3 Right-click the new printer icon and select **Properties** from the menu.

4 Display the **Ports** tab.

5 From the **Print to the following port(s)** list, select the port where the Digital Copier IP address is displayed.

6 Click the **OK** button of the Properties dialog box to close it.

7 Right-click the printer icon again to display its Properties dialog box, display the **General** tab, and then perform a Test Print operation.

8 If the test prints normally, complete the procedure by clicking **OK** to close the Properties dialog box.

After you finish installing a printer with the above procedure, you can use it just as you would any standard local printer. The printer can also be used as a network printer by other Windows computers on your network whose Windows NT 4.0 systems are configured the same way as described above.

3.4 Peer-to-Peer Printing Program (Windows)

Peer-to-Peer Printing Program is a Windows utility that lets you output directly to a printer from a computer on a network, without going through a server.

Use this program for peer-to-peer printing under TCP/IP.

Requirements

- Computer must have TCP/IP installed and enabled.
- Network Card must have valid IP parameters assigned.

Note

Refer to the applicable Windows documentation for information about installing TCP/IP under Windows.

Installing the IP Peer-to-Peer Printing Program

Use the following procedure to install the IP Peer-to-Peer Printing Program.

1. Load the CD-ROM into the CD-ROM drive of the computer you want to use.
2. Start **Setup.exe** in the **lp-p2p** folder on the CD-ROM.
3. Follow the instructions that appear on the screen to complete the installation.
   The default installation directory is **C:\Program Files\lp-p2p**. You can change this to any other directory during the installation procedure.

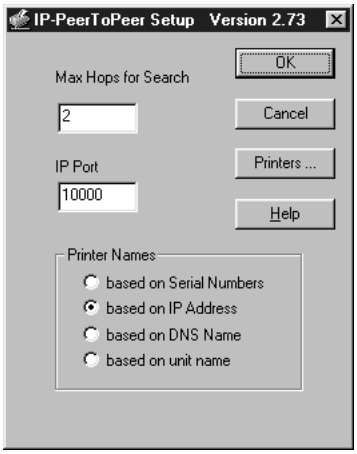
Note

*The message **Use the Add Printer Wizard in the Printer Group to add new Peer to Peer IP Printers**. appears on the screen at the end of the installation procedure. The installation procedure does everything required to install the program correctly, so simply click **OK** to clear this message.*

Setting Up the Peer-to-Peer Printing Program

1 On the **Start** menu, point to **Programs** and then **lp-p2p**.

2 On the submenu that appears, click **IP-P2P**.
Make the settings you want on the dialog box that appears.



- **Max Hops for Search**
  Input a value for the maximum number of hops for the search. The initial default value is 2. See the precautions under “Management Access Program (Windows)” (p. 8-28) for more information about the maximum number of hops.
- **IP Port Base**
  Input the print server initial port number. The initial value is 10000 (TCP/IP port 10001), but you can change this setting if you need to.
- **Printer Names**
  Select the printer port name display format.
  based on Serial Numbers
  Select this option to use Network Card serial numbers to distinguish between printers. The serial number is displayed as follows: MLT_<*serial number*>
  When a Network Card serial number is SN991354, for example, the printer port name becomes MLT_991354.
  based on IP Address
  Default display format. Select this option to use IP addresses to distinguish between printers. When the IP address is 199.99.92.99, for example, the printer port name becomes 199.99.92.99.

based on DNS Name
Select this option to use DNS names to distinguish between printers.
Example: PTR-MKTG.DOMAIN.COM
based on unit name
Select this option to use unit names to distinguish between printers.

3 After the settings are the way you want, click **OK** to close the dialog box. Restart Windows to put your settings into effect.

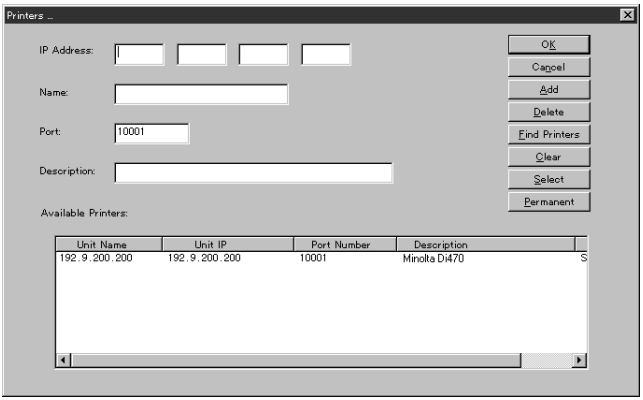
Network Cards may be undetectable with certain routers and maximum hops settings made with the above procedure. When this happens, you must add printers manually using the procedure describe below.

Adding a Printer Manually

1 On the **Start** menu, point to **Programs** and then **lp-p2p**.

2 On the submenu that appears, click **IP-P2P** to display the Peer-to-Peer IP Setup dialog box.

3 Click the **Printers** button to display the dialog box shown below.



4 Input the required information for the printer you want to add into the fields provided.

- **IP Address**
  Input the IP address of the printer you want to add.
- **Name**
  Input the name you want to assign to the printer. Use an easily understandable name.
- **Port**
  Input the printer port number. The default port number is 10001.
- **Descriptions**
  Input a description of the printer.

5 After making all the settings, click **Add** to close the dialog box.

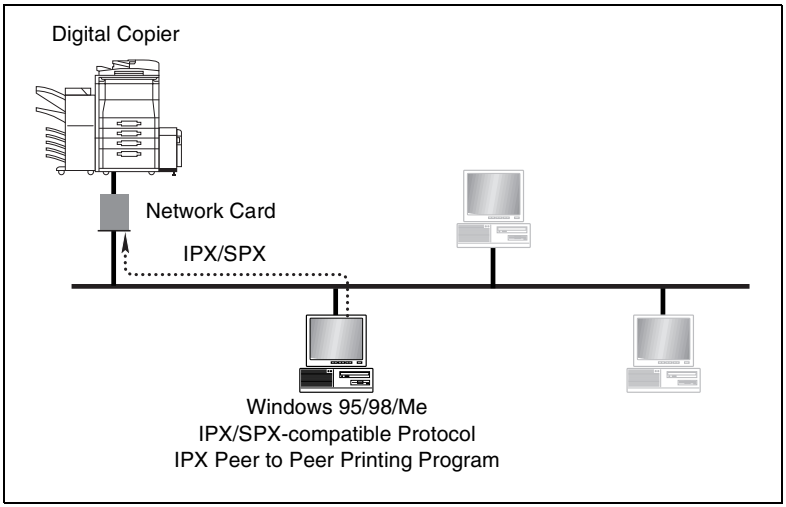
6 After you are finished adding printers, click **OK**.

Printers you add using IP Peer-to-Peer printing are added to the **PORT** list of the printer properties dialog box and can be selected for printing.

3.5 Peer-to-Peer Printing with IPX/SPX

Use the bundled IPX Peer-to-Peer Printing Program for IPX/SPX peer-to-peer printing under Windows.

With IPX Peer-to-Peer Printing Program, there is no need to run NetWare Client.



Configuration Procedure

1 Install IPX/SPX-compatible Protocol under Windows.
Refer to the applicable Windows documentation for more information.

2 Install the IPX Peer-to-Peer Printing Program.
Use the IPX Peer-to-Peer Printing Program for peer-to-peer printing.
See “3.6 IPX Peer-to-Peer Printing Program (Windows)” (p. 3-14) for more information.

3 Use the procedure below to install the printer.

To install the printer

1 On the **Start** menu, point to **Settings** and then click **Printers**.

2 Double-click **Add Printer** and install the printer. Make the new printer the default printer.
See “2 Installing the Printer Driver” (p. 2-1) for details about how to install it.

3 Right-click the new printer icon and select **Properties** from the menu.

4 Display the **Details** tab.

5 Click the **Print to the following port** box and then select the port added by the IPX Peer-to-Peer Printing Program.

6 Click the **Apply** button of the Properties dialog box.

7 Display the **General** tab and print a test page.

8 If the test prints normally, complete the procedure by clicking **OK** to close the Properties dialog box.

After you finish installing a printer with the above procedure, you can use it just as you would any standard local printer. The printer can also be used as a network printer by other Windows computers on your network whose Windows 95/98/Me systems are configured the same way as described above.

3.6 IPX Peer-to-Peer Printing Program (Windows)

Use this program for peer-to-peer printing under IPX/SPX. Just by installing this program, you can specify an IPX-based printer on the network as a printer port.

Requirements

- Computer must have IPX/SPX-compatible protocol installed.

Note

Refer to the applicable Windows documentation for information about installing IPX/SPX under Windows.

Installing the IPX Peer-to-Peer Printing Program

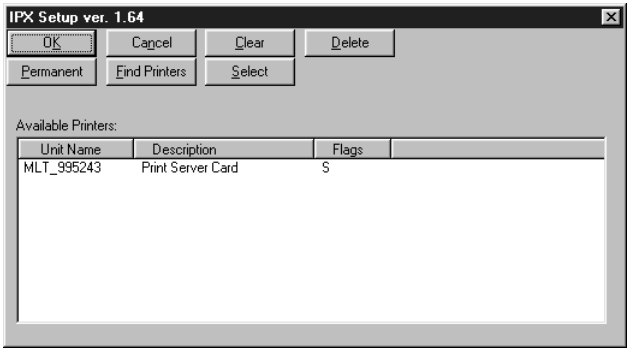
Use the following procedure to install the IPX Peer-to-Peer Printing Program.

1 Load the CD-ROM into the CD-ROM drive of the computer you want to use.

2 Start **Setup.exe** in the **Ip-p2p** folder on the CD-ROM.

3 Follow the instructions that appear on the screen to complete the installation.

The screen shown below appears automatically after installation is complete.



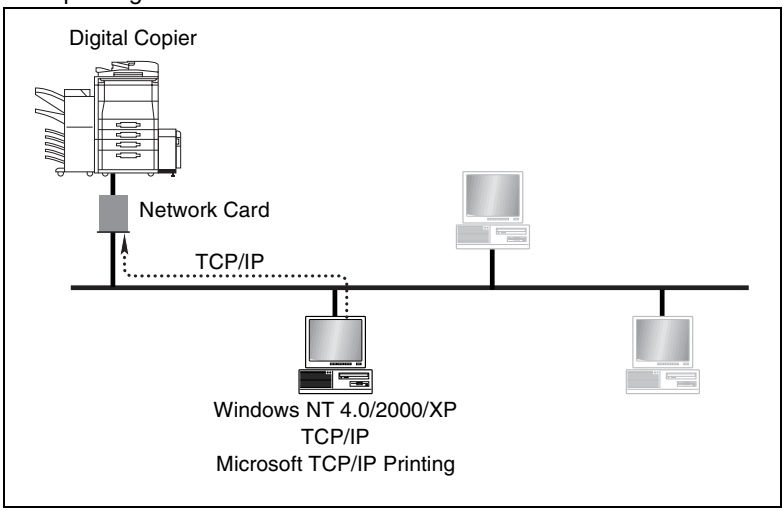
You can use this screen to configure the IPX Peer-to-Peer Printing program. If you do not want to change any settings, simply click **OK** to quit the program. The following describes the contents of this screen.

- **OK**
  Clicking this button applies the changed settings and exits the program.
- **Cancel**
  Clicking this button exits the program without applying the changed settings.
- **Clear**
  Clicking this button clears the contents of the **Available Printers** list, except for printers whose permanent flag is turned on.
- **Delete**
  Clicking this button deletes the currently selected printer from the **Available Printers** list. A deleted printer no longer appears in the printer PORT list. A deleted printer can be re-added using the **Find Printers** button.
- **Permanent**
  Clicking this button toggles the permanent flag setting on and off for the printer that is currently selected in the **Available Printers** list. A printer whose permanent flag is turned on is not cleared from the **Available Printers** list by the **Clear** or **Delete** button, even if the printer is physically removed from the network.
- **Find Printers**
  Clicking this button searches for available printers on the network and displays the corresponding print server names in the **Available Printers** list.
- **Select**
  Clicking this button toggles the S flag setting on and off for the printer that is currently selected in the **Available Printers** list. A printer whose S flag is turned on appears in the **PORT** list of the printer **Properties** dialog box, where it can be selected. The initial start up default is S flag on for all printers in the **Available Printers** list. Up to 30 S flags can be turned on at any one time.
- **Available Printers**
  This is a list of all the printers detected on the network. You can clear this list by clicking the **Clear** button. Then you can update the list by clicking the **Find Printers** button.
  The following describes the three fields of the **Available Printers** list.

- **Unit name**
  This field shows Network Card names. The format for the default name of this Network Card is MLT_<*serial number*>.
- **Description**
  This field displays a description of the printer. Normally, this field shows the manufacturer name and printer model name.
- **Flags**
  An S flag displayed here means the select flag is turned on, so the printer is included in the **PORT** list of the printer Properties dialog box. A P flag displayed here means the permanent flag is turned on, so the printer cannot be deleted from the list by the **Clear List** button or **Delete** button.

3.7 LPR Printing

This section explains how to use the Windows NT 4.0/2000/XP standard LPR printing function.



Requirements

- Computer must have TCP/IP installed and enabled.
- Network Card must have valid IP parameters assigned.

Configuration Procedure (Windows NT 4.0)

1 Install TCP/IP and Microsoft TCP/IP Printing service under Windows NT.
Refer to the applicable Windows documentation for more information.

2 Assign the IP parameters.
See “3.2 Specifying the IP Address From the Printer’s Touch Panel” (p. 3-2) for more information.

3 Use the procedure below to install the printer.

Installing the printer (Windows NT 4.0)

1 On the **Start** menu, point to **Settings** and then click **Printers**.

2 Double-click **Add Printer** and install the printer. Make the new printer the default printer.
See “2 Installing the Printer Driver” (p. 2-1) for details about how to install it.

3 Right-click the new printer icon and select **Properties** from the menu.

4 Display the **Ports** tab.

5 Click **Add Port**.

This displays a list of enabled port types.

6 Select **LPR Port** and then click **New Port**.

7 On the Add LPR compatible printer dialog box, type the IP address of the Network Card into the **Name or address of server providing lpd** box.
If the network you are on uses DNS (Domain Name Services), type in the DNS name instead of the IP address.

8 Type **PORT 1** into the **Name of printer or print queue on that server** box, and then click **OK** to close the dialog box.

9 Click the **Close** button of the Printer Ports dialog box, and then click the **OK** button of the **Properties** dialog box to close it.

10 Right-click the printer icon again to display its Properties dialog box, display the **General** tab, and then print a test page.

11 If the test prints normally, complete the procedure by clicking **OK** to close the Properties dialog box.

After you finish installing a printer with the above procedure, you can use it just as you would any standard local printer. The printer can also be used as a network printer by other Windows computers on your network whose Windows NT 4.0 systems are configured the same way as described above.

Configuration Procedure (Windows 2000/XP)

1 Install TCP/IP under Windows 2000/XP.
Refer to the applicable Windows documentation for more information.

2 Assign the IP parameters.
See “3.2 Specifying the IP Address From the Printer’s Touch Panel” (p. 3-2) for more information.

3 Use the procedure below to install the printer.

Installing the printer (Windows 2000/XP)

1 Install the printer driver following the instructions that come with the installer. Make the new printer the default printer.

2 Right-click the new printer icon and select **Properties** from the menu.

3 Display the **Ports** tab.

4 Click **Add Port**.
This displays a list of available port types.

5 Select **Standard TCP/IP Port** from the list, and then click **New Port**.
This starts **Add Standard TCP/IP Printer Port Wizard**.

6 Click **Next** on the introduction page of the wizard.

7 On the **Add Port** page, type the IP address of the Network Card into the **Printer Name or IP Address** box.
If the network you are on uses DNS (Domain Name Services), type in the DNS name instead of the IP address.

8 Type the name of the port you want into the **Port Name** box, and then click **Next**.

...

Note

*When you type the IP address into the **Printer Name or IP Address** box, the name of the port is automatically entered in the **Port Name** box as `IP_<IP address>`, but you can change the port name as you want.*

9 On the **Additional Port Information Required** page, select **Custom**, and then click **Settings**.

10 On the Configure Standard TCP/IP Port Monitor dialog box, select **LPR** from the **LPR Settings** box.

11 Type **PORT1** in the name of the queue you want into the **Queue Name** box, and then check the **LPR Byte Counting Enabled** check box.

12 Click **OK** to return to the **Additional Port Information Required** page.

13 Click **Next** to display the next wizard page, and then click **Finish**.

14 Click the **Close** button of the Printer Ports dialog box, and then click the **Apply** button of the Properties dialog box.

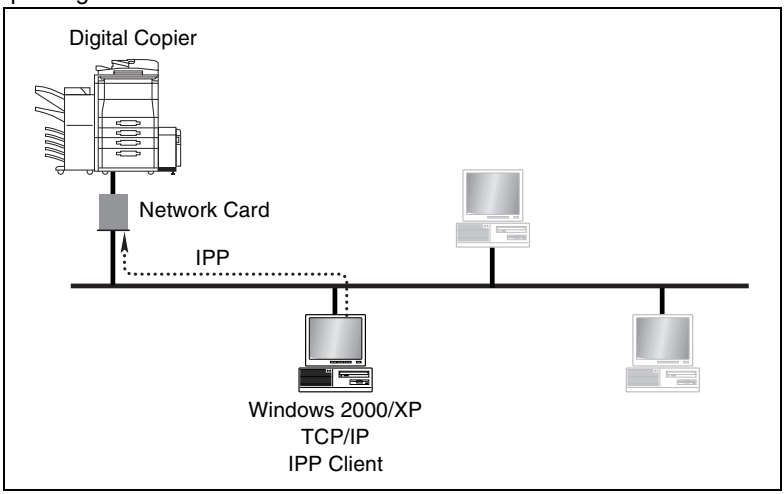
15 Display the **General** tab, and then print a test page.

16 If the test prints normally, complete the procedure by clicking **OK** to close the Properties dialog box.

After you finish installing a printer with the above procedure, you can use it just as you would any standard local printer. The printer can also be used as a network printer by other Windows computers on your network whose Windows 2000/XP systems are configured the same way as described above.

3.8 IPP Printing

This section explains how to use the Windows 2000/XP standard IPP printing function.



Requirements

- Computer must have TCP/IP installed and enabled.
- Network Card must have valid IP parameters assigned.

Configuration Procedure

1 Install TCP/IP under Windows 2000/XP.
Refer to the applicable Windows documentation for more information.

2 Assign the IP parameters.
See “3.2 Specifying the IP Address From the Printer’s Touch Panel” (p. 3-2) for more information.

3 Use the procedure below to install the printer.

Installing the printer

1 For Windows 2000, on the **Start** menu, point to **Settings** and then click **Printers**.
For Windows XP, on the **Start** menu, click **Printers and Faxes**.

2 For Windows 2000, double-click the **Add Printer** icon to start the Add Printer Wizard.
For Windows XP, click the **Add Printer** icon to start the Add Printer Wizard.

3 Click **Next** on the introduction page of the wizard.

4 On the **Local or Network Printer** page, select the **Network printer** option, and then click **Next**.

5 On the **Locate Your Printer** page, select the **Connect to a printer on the Internet or your intranet** option.

6 Type the IPP printer's URL into the **URL** field as shown below, and then click **Next**.

`http://<IP address of the printer>:631/nic/Print`

(Example) When the IP address of the Digital Copier is 192.9.200.200:

`http://192.9.200.200:631/nic/Print`

7 Click **OK** on the confirmation dialog box that appears.

8 In the **Manufacturers** and **Printers** lists, select the printer you want to use, and then click **OK**.
If the name of the printer you want to use does not appear in the lists, load the Printer Drivers CD-ROM that comes with your Digital Copier into your computer's CD-ROM drive and then click the Have Disk button. Next, specify the location of the printer's INF file on the CD-ROM.

9 Select whether you use this printer as the default printer or not, and then click **Next**.

10 Click **Finish** to exit the wizard.

11 Click the icon of the newly added printer to select it, and then click **Properties** on the **File** menu.

12 Display the **General** tab and then print a test page.

13 If the test prints normally, complete the procedure by clicking **OK** to close the **Properties** dialog box.

After you finish installing a printer with the above procedure, you can use it just as you would any standard local printer. The printer can also be used as a network printer by other Windows computers on your network whose Windows 2000/XP systems are configured the same way as described above.

3.9 Specifying network settings from PageScope Light

Access

PageScope Light for Pi4700e can be accessed directly from a Web browser.

1 Start the Web browser.

2 In the URL field, enter the IP address of the printer controller as shown below.

`http://<IP address of printer controller>/`

(Example) When the IP address of the printer controller is 192.9.200.200:

`http://192.9.200.200/`

3 This causes PageScope Light for Pi4700e screen to appear.

Operation

PageScope Light for Pi4700e operation is identical to that for Internet Web pages. Clicking a hot link jumps to the link destination, and the **Back** and **Forward** buttons scroll through pages backwards and forward.

Logging In to the Admin Mode

After you log in to PageScope Light in the Admin Mode, you can change the configuration of the Digital Copier settings.

1 Type the administrator password into the **Admin Password** box. The initial default administrator password is sysadm. See “Preference” for information about how to change the password.

2 Click the **Log-in** button to log in to the Admin Mode.

3 When you want to log out, click the **Log-out** button.

Note

Log out is performed automatically if no operation is performed for more than 10 minutes.

*On the **Network** tab, a password input text box appears on each setting screen. You must be able to input the correct password in order to change **Network** tab settings. The password you should input here is the same as the Admin Password you input on other tabs.*

Network Tab

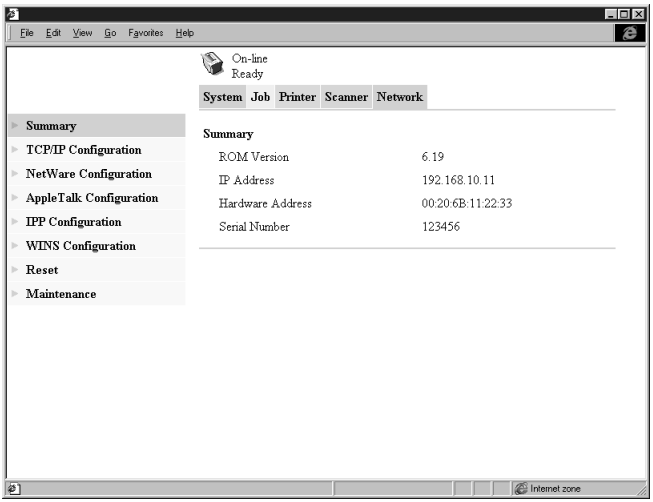
Use the **Network** tab for configuring the Pi4700e network interface.

Note

*On the **Network** tab, you must type the password into the **Password** box that appears on the setting screen you select on the menu. Note, however, that you need to input the password on the **Network** tab only once per session. After you input the password, the **Password** box does not appear any more on other **Network** tab setting screens during the current session.*

Summary

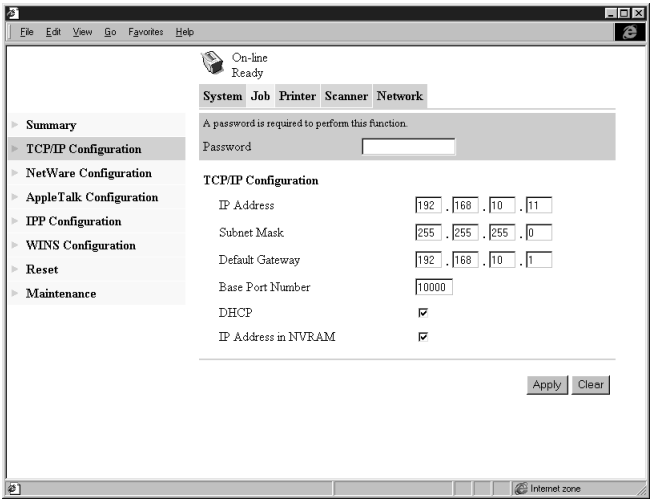
This screen appears when you click the **Summary** menu on the **Network** tab. Use this screen to view a summery of the network interface card.



ROM Version	Network interface card firmware version
IP Address	IP address assigned to the current network interface card
Hardware Address	MAC address of network interface card
Serial Number	Serial number of network interface card

TCP/IP Configuration

This screen appears when you click the **TCP/IP Configuration** menu on the **Network** tab. It lets you change a number of network interface card TCP/IP settings.



Password	Input the password assigned to the network interface card. The initial factory default is **sysadm**. Clicking the **Apply** button after inputting the wrong password displays a password error message without changing the settings.
IP Address	Input the IP address you want to assign to the network interface card.
Subnet Mask	Input the network subnet mask.
Default Gateway	If the network has a router, input the IP address of the router.
Base Port Number	Type in the base port number for RAW port printing. A port number that in one greater than the base port number you specify here is used for actual printing. Example: Specifying a base port number of 10000 results in an actual port number of 10001.
DHCP	Checking this option sends a DHCP (Dynamic Host Configuration Protocol) request whenever the network interface card is powered up. When there is a DHCP server on the network, the network interface card can obtain IP parameters automatically from the server at power up.
IP Address in NVRAM	When this option is checked, the network interface card uses the IP address stored in NVRAM when the card is powered up.
Apply button	Click this button to apply any settings you have input up to this point.
Clear button	Click this button to cancel any settings you have input up to this point.

...

Note

Use only IP parameters that have been specified or approved by your network administrator.

The network interface card does not send DHCP requests when DHCP is disabled. If there is no IP address assigned to the network interface card or if ***IP Address in NVRAM*** *is turned off, the network interface card sends a BOOTP request.*

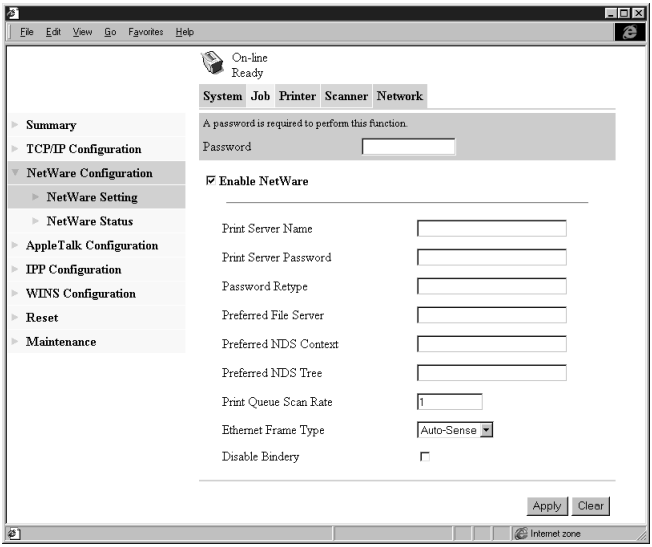
A DHCP request is sent when the network interface card is reset or powered up (while DHCP is enabled and no IP address assigned to the network interface card or if ***IP Address in NVRAM*** *is turned off).*

When DHCP is enabled, an IP address is assigned to the network interface card, and ***IP Address in NVRAM*** *is turned on, the network interface card uses the IP address stored in NVRAM. In this case, the network interface card does not send a DHCP request.*

In a DHCP environment, it is necessary to specify an unlimited lease period for the IP address assigned to the network interface card or the IP address must be reset a fixed address within a range that is not leased.

NetWare Configuration

Sub-menus appear when you click the **NetWare Configuration** menu on the **Network** tab. Use the sub-menus to display and configure the network interface card settings for NetWare printing.



NetWare Setting

This screen appears when you click the **NetWare Setting** sub-menu under the **NetWare Configuration** menu. It lets you change a number of NetWare environment settings.

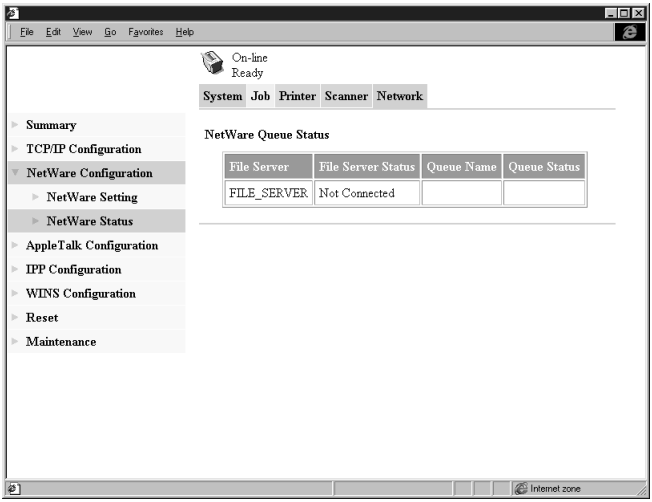
Password	Input the password assigned to the network interface card. The initial factory default is **sysadm**. Clicking the **Apply** button after inputting the wrong password displays a password error message without changing the settings.
Enable NetWare	Check this option to enable IPX/SPX on the network interface card. The NetWare environment is disabled while this option is unchecked.
Print Server Name	Input the print server name you want. The default print server name when this field is left blank is: MLT_<*Network Interface Card serial number*>.
Print Server Password	When you want to use a password for logging into the network interface card, type the password you want to specify into the field. Type the same password into the **Password Retype** field for confirmation. The password you specify must be the same as the bindery and NDS-based print server password.

Preferred File Server	Type in the name of the preferred file server when setting up for bindery and bindery emulation. See *"8 Network Interface Card"* for more information about the preferred file server. The print server must always be configured on a preferred file server. Failure to properly configure the preferred file server can cause incorrect printing results.
Preferred NDS Context	Input the print server for NDS operation. In this case, always input the entire context, without inputting a period at the beginning of the path. Example: ou=standard.ou=organization_1
Preferred NDS Tree	Input the print server for NDS operation. If you do not know what the tree is, input **whoami** at the DOS command line.
Print Queue Scan Rate	Specify the print server's queue scan interval in seconds. The default scan rate is 1 second.
Ethernet Frame Type	Specify the frame type being used by Ethernet. Normally, the frame type being used by NetWare is determined by monitoring the network interface card. When the frame type is determined, it is assumed that the network interface card is the same frame type. Once you select a frame type, network interface card operation supports that NetWare frame type only. Frame type monitoring normally starts from IEEE 802.3, and then moves to Ethernet II and then 802.3 SNAP. When the network you are on uses multiple Ethernet frame types, use the pull-down menu to select the frame type to be recognized.
Disable Bindery	Check this option to disable bindery when only the NDS mode is used. When bindery is disabled, the network interface card no longer supports the print server on the bindery file server.
Apply button	Click this button to apply any settings you have input up to this point.
Clear button	Click this button to cancel any settings you have input up to this point.

The settings you make on this screen do not become valid until you reset the network interface card or power it down and then back up again. See "Reset" (p. 3-34) for more information on resetting the network interface card.

NetWare Status

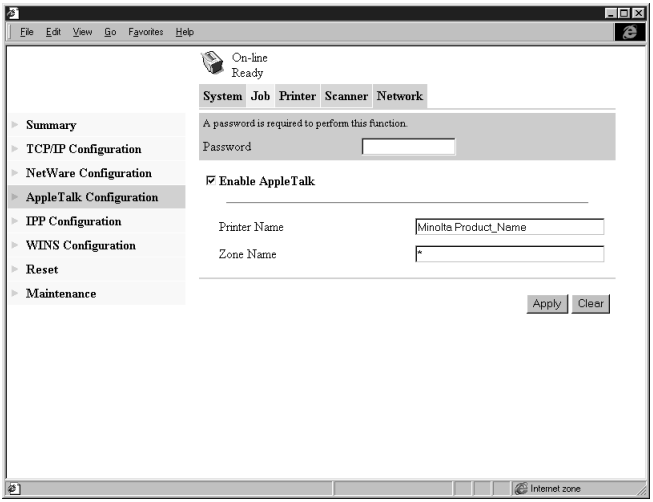
This screen appears when you click the **NetWare Status** sub-menu under the **NetWare Configuration** menu. Use this screen to check the status of the file server and queue to which the network interface card is attached.



File Server	Name of the NetWare server to which the printer is currently attached
File Server Status	Status of connection to NetWare server
Queue Name	Name of NetWare print queue to which the printer is currently allocated
Queue Status	NetWare print queue status

AppleTalk Configuration

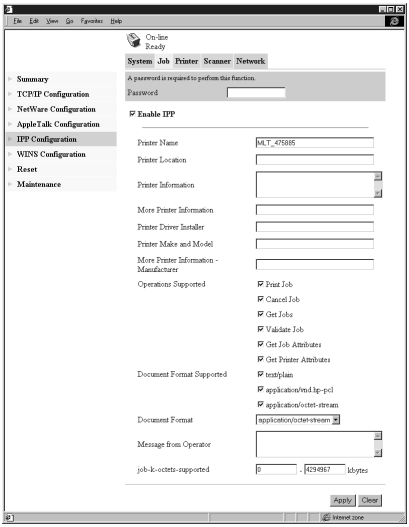
This screen appears when you click the **AppleTalk Configuration** menu on the **Network** tab. It lets you change a number of AppleTalk environment settings.



Password	Input the password assigned to the network interface card. The initial factory default is **sysadm**. Clicking the **Apply** button after inputting the wrong password displays a password error message without changing the settings.
Enable AppleTalk	Check this option to enable AppleTalk on the network interface card.
Printer Name	Input the printer name you want.
Zone Name	Input the name of AppleTalk zone in which you want to locate the printer.
Apply button	Click this button to apply any settings you have input up to this point.
Clear button	Click this button to cancel any settings you have input up to this point.

IPP Configuration

This screen appears when you click the **IPP Configuration** menu on the **Network** tab. It lets you change Internet Printing Protocol (IPP) settings. You can configure the printer functions that are controlled by IPP and the printer information that can be seen from IPP clients.



Note

Standard access for IPP printing is:

`http://<IP Address>:631/nic/Print`

For details about IPP printing, see "8 Network Interface Card".

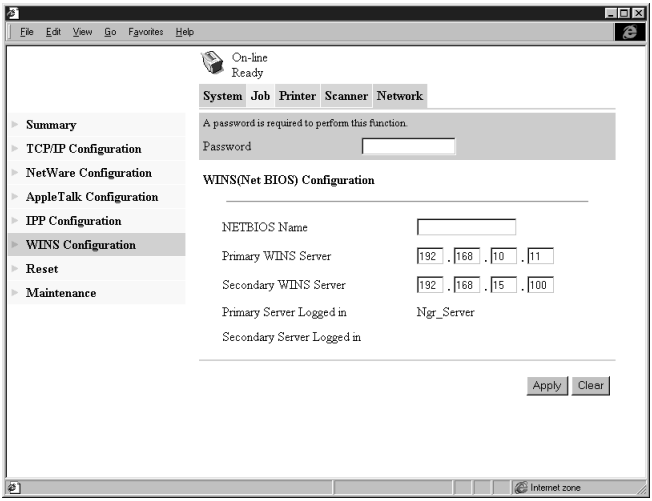
Password	Input the password assigned to the network interface card. The initial factory default is **sysadm**. Clicking the **Apply** button after inputting the wrong password displays a password error message without changing the settings.
Enable IPP	Check this option to enable IPP on the network interface card. You cannot use IPP print unless this option is checked.

The following items are returned when attributes are requested from an IPP client.

Printer Name	Type in a name to identify the printer during IPP printing.
Printer Location	Type in the location of the printer.
Printer Information	Type in a description of the printer.
More Printer Information	Specify a URL where detailed information about this particular printer can be found.
Printer Driver Installer	Specify a URL where the printer driver installer can be found.
Printer Make and Model	Type in the printer manufacturer name and model name.
More Printer Information Manufacturer	Specify a URL where detailed information about the printer manufacturer particular printer can be found.
Operations Supported	Use these settings to specify the IPP printing operations supported by the printer. Unchecking an item means that it is not supported for IPP printing.
Document Format Supported	Put a check mark next to the document data formats that the printer supports for IPP printing.
Document Format	Select the default document data format. The uses this data format for IPP printing when no data format is specified by the client.
Message from Operator	Type in a message from the printer administrator to users.
job-k-octets-supported	Specify, in kilo-octet units, the upper limit and lower limit of the total job size that the printer can receive.
Apply button	Click this button to apply any settings you have input up to this point.
Clear button	Click this button to cancel any settings you have input up to this point.

WINS Configuration

This screen appears when you click the **WINS Configuration** menu on the **Network** tab. It lets you change WINS settings. WINS (Windows Internet Name Service) makes it possible for a device, such as your network interface card, to register a NetBIOS name (like MLT_995243) along with its current IP address (like 192.9.200.200). A client wanting to contact the printer uses the WINS server to match the NetBIOS name with an IP address. Most users will find it easier to remember the NetBIOS name for the printer rather than its IP address.



Password	Input the password assigned to the network interface card. The initial factory default is **sysadm**. Clicking the **Apply** button after inputting the wrong password displays a password error message without changing the settings.
NetBIOS Name	The NetBIOS name for the network interface card is shown on this screen. The default NetBIOS name is the Network Interface Card's serial number (for example, MLT_995243), unless you previously configured a name for the network interface card with DHCP. You may change the NetBIOS name here, by entering a new name. The name can be up to 15 characters long.
Primary WINS Server	If you previously configured a DHCP server to provide the network interface card with the IP address of the primary WINS server, this item shows the address. Otherwise, enter the IP address of the primary NetBIOS name server here.
Secondary WINS Server	You may also enter the IP address of a secondary NetBIOS name server, if you want. If you configured your DHCP server to provide the address of a secondary WINS server to the network interface card, the address fields are filled in with the appropriate information automatically.

Primary Server Logged in	Name of the Primary WINS Server to which the printer is currently logged in.
Secondary Server Logged in	Name of the Secondary WINS Server to which the printer is currently logged in.
Apply button	Click this button to apply any settings you have input up to this point.
Clear button	Click this button to cancel any settings you have input up to this point.

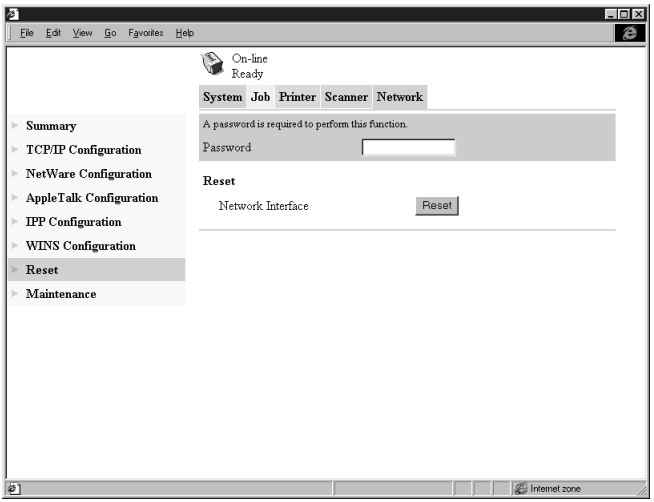
After you configure the NetBIOS (WINS) settings, restart the printer.

The network interface card's status page should now show that the network interface card is successfully registered with the WINS server. The items labeled **Primary Server Logged** in and **Secondary Server Logged** in on the **WINS Configuration** screen now indicate which WINS server(s) the network interface card is registered with.

Under normal circumstances, your network interface card automatically renews its registration with the WINS server before its lease expires.

Reset

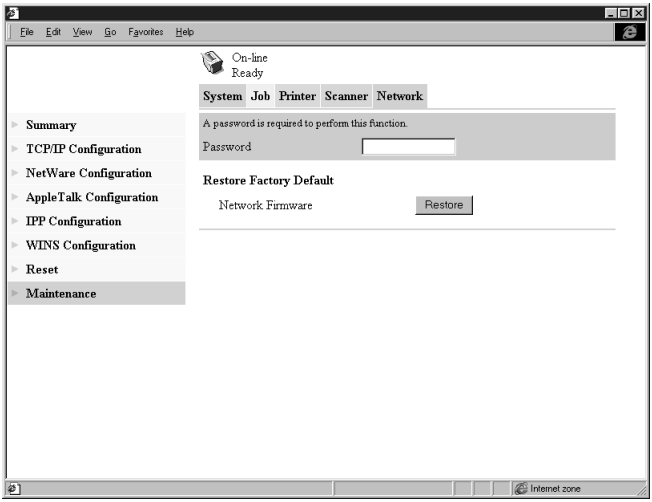
This screen appears when you click the **Reset** menu on the **Network** tab. Use this screen to reset the network interface card so new settings can take effect.



Password	Input the password assigned to the network interface card. The initial factory default is **sysadm**. Clicking the **Apply** button after inputting the wrong password displays a password error message without changing the settings.
Reset button	Click this button to reset the network interface card.

Maintenance

This screen appears when you click the **Maintenance** menu on the **Network** tab. Use this screen to restore the network interface card to its initial factory default settings.



Password	Input the password assigned to the network interface card. The initial factory default is **sysadm**. Clicking the **Apply** button after inputting the wrong password displays a password error message without changing the settings.
Restore Factory Defaults	Click the **Restore** button to restore the network interface card to its initial factory defaults.

Note

After performing a Reset or Maintenance, turn the digital copier off, then on again.

4 Properties Settings

4.1 Description of each tab

Each tab enables you to change the settings indicated below. For a detailed description of each function, see the corresponding reference page.

Property tab	Outline of settings that can be changed	Reference page
Setup	Allows you to set the paper take-up tray and paper exit tray. Also allows you to set high level printing functions such as two-sided printing, booklet creation, N-up printing, OHP interleaving, Watermark, Cover Mode, Staple, Punch, and Folding.	p. 4-7
Paper	Allows you to set basic printing items such as number of copies, paper size, print orientation and print zoom ratio. Also allows you to set functions related to sorting.	p. 4-16
Quality	Allows you to set general items related to graphics, such as resolution, halftone processing and image processing method. Also allows you to set TrueType fonts.	p. 4-21
Device Options Setting	Allows you to set option equipment installed on the machine.	p. 4-2
Job Management	Sets the copy track function. Allows you to lock a printing job. Also allows you to print the distribution number.	p. 4-24
PostScript (PS driver only	Allows you to make detailed settings related to PostScript.	p. 4-31
–	Allows you to save and read the contents of the settings on a Setup, Paper, Quality, Job Management, Device Options Setting or PostScript tab.	p. 4-5

...

Note

Refer to Chapter 2 for the procedure for displaying Properties.

Note that different settings must be made for each driver.

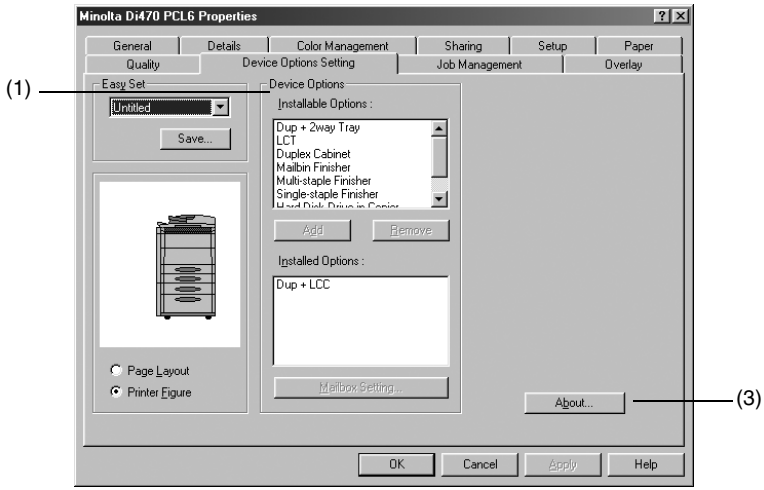
The differences between each driver are indicated based on the PCL6 version driver for Windows 98.

Details of OS-dependent functions are not given.

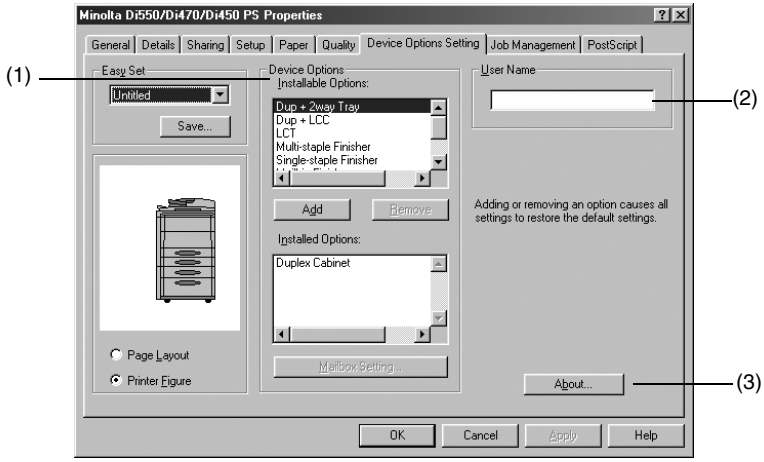
4.2 Device Options Setting tab

This tab allows you to set the options installed on the machine. Make sure you select the options correctly. Otherwise, some functions may be unusable or printing errors may occur. The settings must match the machine configuration.

PCL6 version



PS version



(1) **Device Options**
Set the options installed in the machine.

- Installable Options — This is a list of installable options. Select the desired options from this list.
  Available settings:
  Dup+2way Tray, Dup+LCC, Duplex Cabinet, LCT, Mailbin Finisher, Multi-staple Finisher, Single-staple Finisher, Folding Finisher, Hard Disk Drive in Copier
- Add — Pressing this button adds the selected option.
- Remove — Pressing this button removes the selected option.
- Installed Options — This is a list of currently installed options. Select it when you wish to remove an option.
- Mailbox Setting — <when Mailbin Finisher is installed>
  You can add a name to each mailbin of Mailbin Finisher.
  For details, see page 4-4.

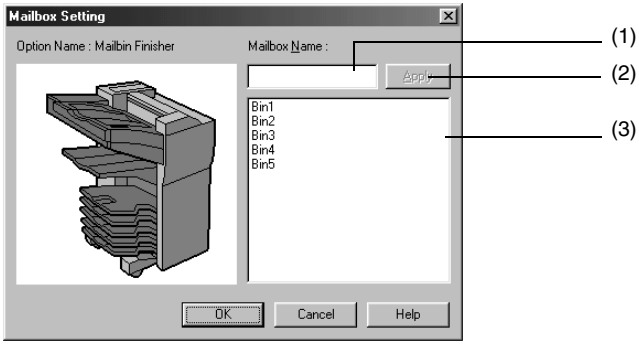
(2) **User Name**
The user name set in the printer driver is displayed as the job user name on the machine's touch panel.
Setting range: 8 characters max.

(3) **About...**
Click to display the manufacturer and version number of the printer driver.

Note
If the Dup+2way Tray, Duplex Cabinet, and Dup+LCC are not correctly selected, it may not be possible to select the Finisher correctly.

Mailbox Setting dialog box <when Mailbin Finisher is installed>

Allows you to set the names of the mailbins in Mailbin Finisher.



(1) **MailBox**
This is the bin name editing box.

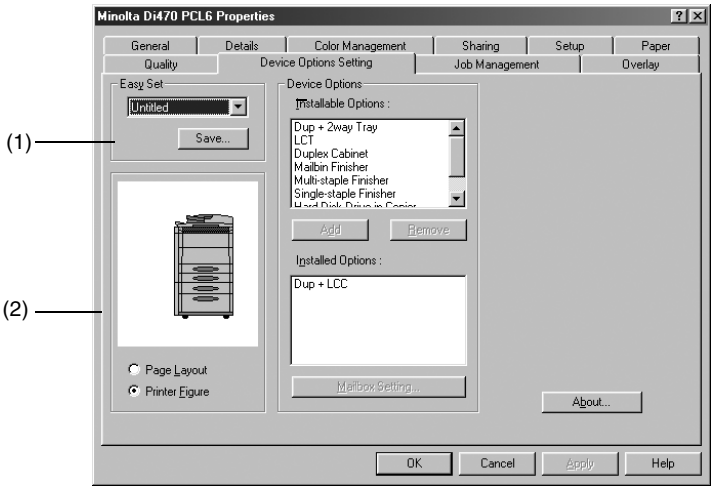
Setting range: max. 20 characters (PCL6)
max. 32 characters (PS)

(2) **Apply**
Press to finalize a changed name.

(3) **Bin list**
Displays a list of names of currently set bins.
To change the name of a bin, select the name you wish to change.

4.3 Functions common to various tabs

These functions are common to tabs from the **Setup** tab to the **Job Management** tab and also the **Overlay** tab or the **PostScript** tab.



(1) **Easy Set**
Allows you to call and use the settings stored in each tab.

- Easy Set Name — Allows you to call the settings stored in each tab.
- Save (Delete) — Used to save/delete the settings of tabs.When you touch the **Save** button to save the contents of a tab, the Save Easy Set Name dialog box appears. For details, see page 4-6.
  When you touch **Delete**, the stored set contents are deleted.

(2) **Paper preview/Machine preview**
Allows you to display/change over the paper preview and machine preview.

- Page Layout — The layout of the printed data on a single page is displayed as an image. This allows you to check the status for N-up printing and two-sided printing, for example. See page 12-12 for the **Page Layout** list.
- Printer Figure — When the paper take-up tray and the paper exit tray are set, the paper take-up tray and paper exit tray are displayed in green.
  See page 12-15 for the **Printer Figure** list.

Note for (1)

Depending on environment used, contents of Save/Delete will be different: Refer to Appendix A for details. (p. 12-9).

Watermark, Custom Paper, Mailbox Name, and Font Substitution Table are not set.

Tips for (1)

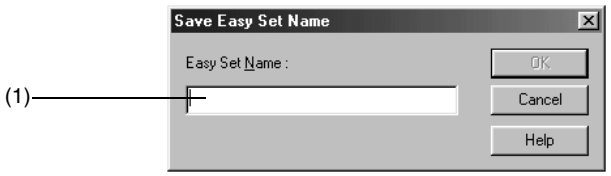
*If the set contents have changed, the **Save** button will appear.*

*If the set contents are the Easy Name contents, the **Delete** button will appear.*

Functions of the Save Easy Set Name dialog box

Use to save print setting data.

Before pressing the **Save** button, be sure to set the contents of each tab.



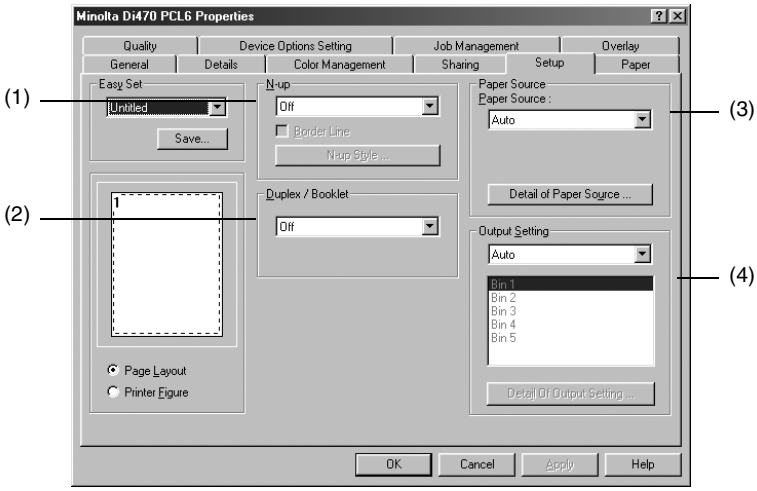
(1) **Easy Set Name**
Add a name to the stored contents.

Number of registrations	Depending on environment used, number of registrations will be different: Refer to Appendix A for details (p. 12-9).
Number of characters	max. 10 characters

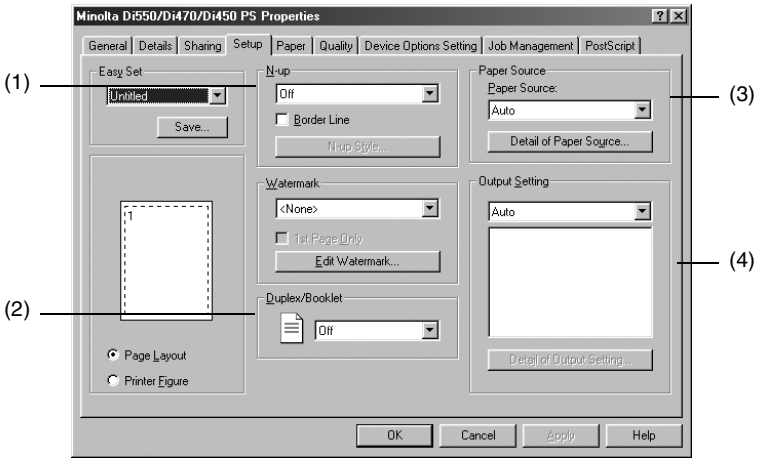
4.4 Setup tab

This tab allows you to set the paper take-up tray, paper exit tray and various high grade printing functions.

PCL6 version



PS version

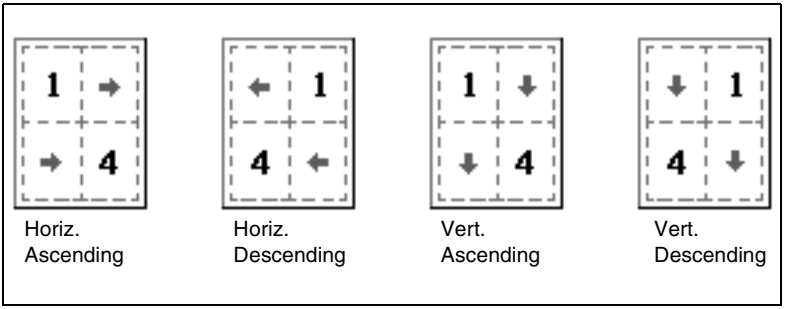


Note

With the PS driver, the Watermark option is included on the Setup tab. For details, refer to "Overlay tab" on page 4-27.

(1) **N-up**
Outputs multiple originals on one sheet of paper.

- N-up — Set the N-up number. Available settings: Off, 2up, 4up, 6up, 9up, 16up
- Border line — Sets the layout border
- N-up Style — Sets the printing layout



(2) **Duplex / Booklet** <when Dup + 2way Tray, Dup + LCC or Duplex Cabinet is installed>
Specifies two-sided printing and Booklet printing.

- Off — Not set
- Short Edge Binding — Two-sided printing takes place so that the short edge is bound.
- Long Edge Binding — Two-sided printing takes place so that the long edge is bound.
- Booklet Left Binding — Four pages are printed on both sides of a single sheet of paper so that when the sheet is folded in the middle it forms a booklet (left bound).
- Booklet Right Binding — Four pages are printed on both sides of a single sheet of paper so that when the sheet is folded in the middle it forms a booklet (right bound).

(3) **Paper Source**
Selects the machine tray to be used.
Sets the cover page function and the OHP interleaving function.

- Paper Source — Select the machine tray to be used. The selectable paper sizes are limited by the types of paper take-up trays installed in the machine. Available settings: Auto, Manual Feed, Tray1 to 4, LCC, LCT
- Detail of Paper Source — Set the cover page function and OHP interleaving function. For details, see page 4-11.

(4) **Output Setting**
This function selects the tray in the machine to which the paper is to be distributed. Settings can also be made for finishing functions including stapling, hole punching, and folding.

- Paper exit destination — Select the machine tray to which you wish to distribute the prints. The selectable paper exit trays are limited by the type of finisher installed in the machine.
  Mailbin Finisher
  Except Mailbin Finisher
- Mailbin paper exit destination — If Mailbin is selected as the paper exit destination, set the mailbin to which you wish to distribute the paper.
- Detail of Output Setting — Set stapling, punching or folding. For details, see page 4-13.

Note for (1)
If you print a document that contains pages of different sizes and/or different directions in the same job, the image may be partially cut or images may overlap each other.

Tip for (1)
The printing layout is displayed on the Page Layout.

Notes for (2)
If you print a document that contains pages of different sizes and/or different directions in the same job, the image may be partially cut or images may overlap each other.

Two-sided printing and OHP interleaving cannot be set simultaneously.

Tips for (2)
The sizes for which you can perform two-sided printing are from 140 × 182 mm to 297 × 432 mm.

Short Edge Binding, Long Edge Biding, Booklet Left Binding and Booklet Right Binding are displayed on the Page Layout.

Note for (3)
Some paper sizes cannot be selected. For details, refer to the User Manual of the machine.

...

Tips for (3)

*Set the paper take-up tray using **Device Options Setting**.*

The paper take-up tray used is displayed in green on the Printer Figure.

...

Note for (4)

Some paper sizes cannot be selected. For details, refer to the User Manual of the machine.

...

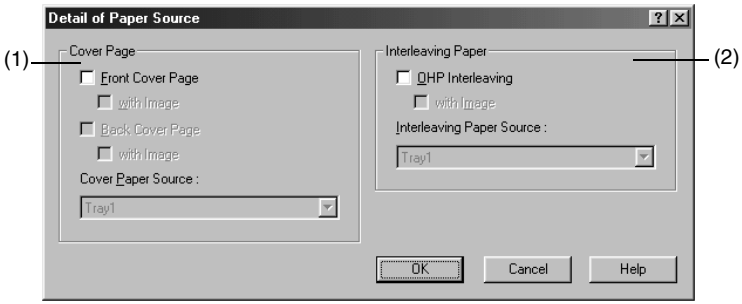
Tips for (4)

*Set the type of finisher using **Device Options Setting**.*

The paper take-up tray used is displayed in green on the Printer Figure.

Functions of the Detail of Paper Source dialog box

This function sets the cover page function and the OHP interleaving function.



(1) **Cover Page**
This function is used to print a document with front and back cover pages. You can print on the front cover, or leave it blank.

- Front Cover Page — Activates the front cover function.
- with Image (Front Cover Page) — Prints on the front cover.
- Back Cover Page — Adds a back cover.
- with Image (Back Cover Page) — Prints on the back cover.
- Cover Paper Source — Select the tray for the front cover and back cover papers. Available settings: Manual Feed, Tray1 to Tray4, LCC, LCT

(2) **Interleaving Paper**
This function inserts sheets (interleaving sheets) between sheets of OHP film when printing on OHP film. You can either leave these sheets blank or print the same image as that printed on the OHP film.

- OHP Interleaving — Activates the OHP interleaving function.
- with Image — Prints an image on the interleaving sheet.
- Interleaving Paper Source — Select the tray for the interleaving paper. Available settings: Tray1 toTray4, LCC, LCT

...

Notes for (1)

When using special paper, such as thick paper, the paper sometimes fails to be distributed to the selected paper exit destination.

*You can set Manual Feed, Tray1 to Tray4, LCC and LCT using **Paper Source**.*

...

Tip for (1)

The tray containing the paper on which the body of the document is to be printed is displayed in green on the Printer Figure.

...

Notes for (2)

When using the OHP interleaving function, set the number of sets of prints to "1".

You cannot select the same paper take-up port for both ***Paper Source*** *and* ***Interleaving Paper Source****.*

You can set Manual Feed only using ***Paper Source****.*

OHP interleaving and two-sided printing cannot be set simultaneously.

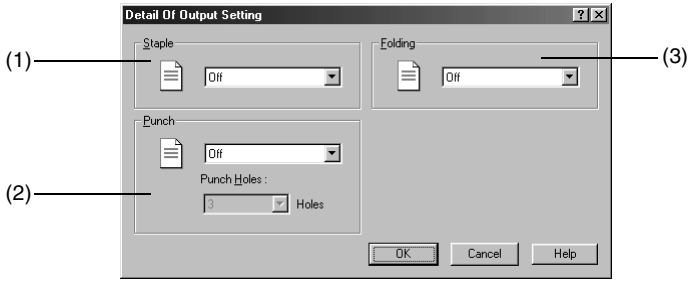
...

Tip for (2)

The OHP film tray is displayed in green on the Printer Figure.

Functions of the Detail of Output Setting dialog box

Settings can be made for finishing functions including stapling, hole punching, and folding.



(1) **Staple** <when Mailbin Finisher, Single-staple Finisher, Multi-staple Finisher or Folding Finisher is installed>
This function allows you to staple one set of printed documents at a time.

- Off — Printed documents are not stapled.
- Corner staple — Printed documents are stapled at their corners.
- Long Edge — <when Multi-staple Finisher or Folding Finisher is installed>
  The documents are stapled along the long edge.
- Short edge — <when Multi-staple Finisher or Folding Finisher is installed>
  The documents are stapled along the short edge.
- Center — <when Folding Finisher is installed>
  The documents are stapled at the center.

(2) **Punch** <when Mailbin Finisher, Multi-staple Finisher or Folding Finisher is installed>
This function allows you to punch holes in the printed document.

- Off — The document is not punched.
- Short Edge — The document is punched along the short edge.
- Long Edge — The document is punched along the long edge
- Punch Holes <Inch area only> — Set the number of holes to be punched.

(3) **Folding** <when Folding Finisher is installed>
Select the desired paper folding function.

- Off — Printed pages are not folded.
- Just Output Size [Z-Fold] — Printed pages are folded into three parts.
- Half Folding — Printed pages are folded in two at their center.
- Crease — A crease is made in printed pages.

Notes for (1)

*If **Staple** is set, printed pages are fed out into the Elevator Tray.*

The stapling position is either the top left corner or the top right corner depending upon the direction of the paper and the printing direction.

If the capacity of Mailbin Finisher, Single-staple Finisher, Multi-staple Finisher or Folding Finisher is exceeded, the stapling operation may be canceled. Refer to the User Manual of the machine.

If you print a document consisting of pages of different sizes in the same printing job, stapling may be canceled.

Take care when printing a document consisting of pages facing different directions, since the stapling position will be determined by the direction of the first page.

You cannot set certain sizes or kinds of paper. For details, refer to the User Manual of the machine.

Only Center Staple can be set with Booklet.

Tip for (1)

You can check the stapling positions using the icons in the dialog box.

Notes for (2)

Number of punch holes can be specified only when Multi-staple Finisher is installed.

***Punch Holes** is not displayed for Metric area.*

You cannot punch certain sizes of paper. Also, you may be unable to punch the paper at certain positions. For details, refer to the User Manual of the machine.

If you select Long Edge in the manual bypass take-up mode, the paper may sometimes fail to be punched.

Punch and OHP interleaving cannot be set simultaneously.

Punch and Booklet cannot be set simultaneously.

...

Tip for (2)

The punching positions are displayed on the icons in the dialog box.

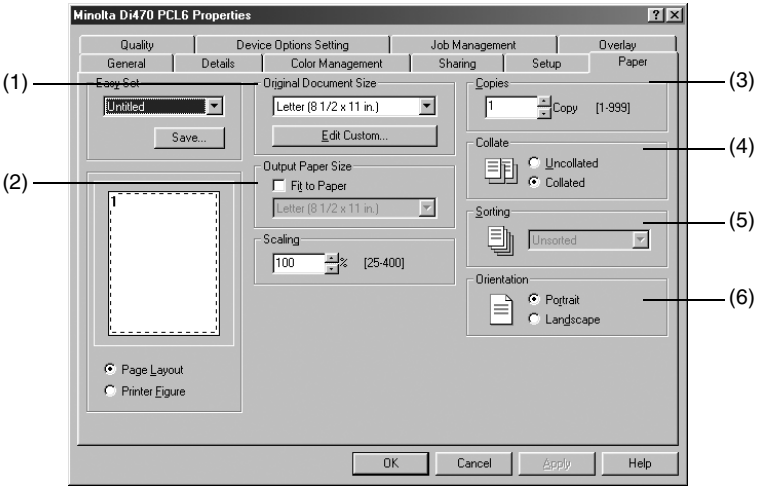
...

Note for (3)

If Folding is combined with Hole-Punch or Staple, the Hole-Punch or Staple function to be used is restricted depending on the specific type of the Folding function combined. For details, see Appendix A (page 12-1) for details.

4.5 Paper tab

The **Paper** tab allows you to make basic printer settings.



(1) **Original Document Size**
Sets the original size.

- Paper size — Select the original size.
  Available settings:
  Letter, Legal, Executive, A3, A4, A5, A6, JIS B4, JIS B5, JIS B6, Invoice, 11 × 17, 11 × 14, FLS1, FLS2, FLS3, FLS4, Special sizes
- Edit Custom — Used to set a special size. For details, see page 4-19.

(2) **Output Paper Size**
Sets the size of the paper on which prints are to be made.

- Output Paper Size — Activates the specification of the size of printing paper. (Displayed only with the PS driver)
- Paper size — Select the size of the printing paper.
  Available settings:
  Letter, Legal, Executive, A3, A4, A5, A6, JIS B4, JIS B5, JIS B6, Invoice, 11 × 17, 11 × 14, FLS2, FLS3, FLS4, Special size
- Fit to Paper — The prints are output at a zoom ratio that matches the size of the printing paper.
- Scaling — Specify the print zoom ratio.
  Setting range: 25 to 400%

(3) **Copies**
Specify the number of sets of prints to be made. Enter the value either directly or by pressing ▲ or ▼.
Setting range: 1 to 999 sets

(4) **Collate**
Use this function when making multiple sets of prints of the same document, to specify whether or not to print one set at a time.

- Uncollated — All of the pages are printed one after the other. For example, if you make five sets of prints, each page is printed in sequence five copies at a time.
- Collated — Prints are output one set at a time. For example, if you make five sets of prints of a 10-page document, the prints will be output one set at a time.

(5) **Sorting**
Select the sorting method.

- Unsorted — Prints are not sorted.
- Sorted — Prints are sorted.

(6) **Orientation**
Select the orientation of the image. You can check the selected direction using Page Layout.

- Portrait — Printing takes place lengthwise.
- Landscape — Printing takes place crosswise.

Note for (1)
Depending on environment used, contents of Save/Delete will be different: Refer to Appendix A (p. 12-11) for details.

Notes for (2)
If you select a size of paper not loaded in the machine or Manual Feed, the machine will give a message prompting you to add paper to Tray1, Tray2, or the manual bypass port and enter into a standby state.

*If the setting made in **Original Document Size** does not match the size specified in the application with **Fit to Paper** selected, the machine takes the paper size set in the application.*

***Fit to Paper** cannot be selected if **Custom Paper** is selected in **Original Document Size**.*

Note for (3)
*When using the OHP interleaving function, set the number of sets of prints to **1**.*

Note for (4)
Keep Collate (Sort) on the application side set to "OFF" at all times.

Tips for (5)

If you output prints to the Elevator Tray when the Single-staple Finisher, Multi-staple Finisher or Mailbin Finisher is installed, the prints are output in a sawtooth manner.

When the Folding Finisher is installed or if none of the finishing options is installed, the prints are output in a criss-cross manner.

The following are the minimum requirements for permitting criss-cross sorting using the Collated setting:

- *Stacks of paper of the same size are loaded in the lengthwise and crosswise directions.*
- *The Staple, Punch or Cover mode is not set.*

*When **Collated** is selected, **Sorting** is dimmed.*

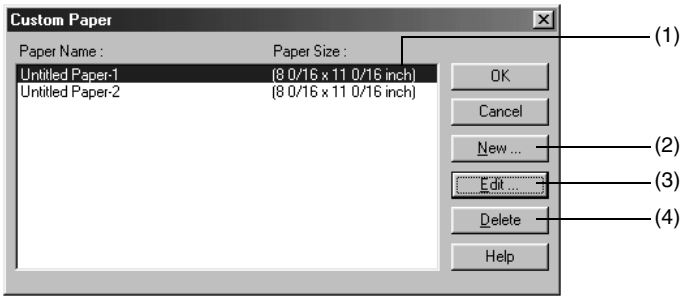
Tip for (6)

A Portrait or Landscape print appears on the Page Layout.

Functions of the Edit Custom Paper or Custom Paper dialog box

The name of the dialog box is Custom Paper for PCL6, Edit Custom Paper for PS.

Use this dialog box to set special sizes of paper.



(1) **Paper Name**
Select the paper name from the Custom Paper list.

(2) **New...**
This function allows you to set a special size of paper. When it is selected, the dialog box changes to the Custom Paper Setting Dialog Box.

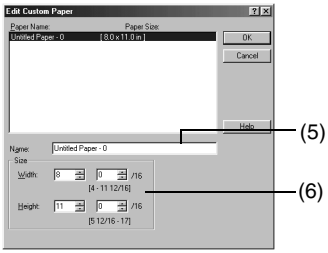
Number of registrations	Depending on environment used, number of registrations will be different: Refer to Appendix A (p. 12-11) for details.

(3) **Edit...**
Edits Custom Paper selected in (1). When it is selected, the dialog box changes to the Custom Paper Setting Dialog Box.

(4) **Delete**
Deletes Custom Paper selected in (1).

Custom Paper Setting dialog box (PCL 6 version)

Edit Custom Paper Setting dialog box (PS version)



(5) **Name**
Enter the Name of the Custom Paper

Setting range:	Max 20 characters

(6) **Size**
Set the paper size.

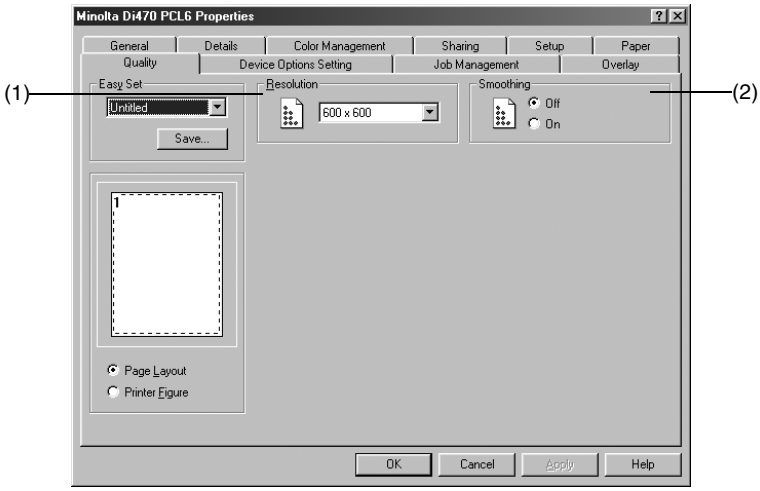
Setting range:

Width:	4 to 11 11/16 (Unit = inch) 100 to 297 (Unit = mm)
Height:	5 13/16 to 17 (Unit = inch) 148 to 432 (Unit = mm)

(7) **Unit**
Switches input units of paper size between inch and metric.

4.6 Quality tab

PCL6 version



(1) **Resolution**
Select the printing resolution.
Setting range: 600 × 600 dpi

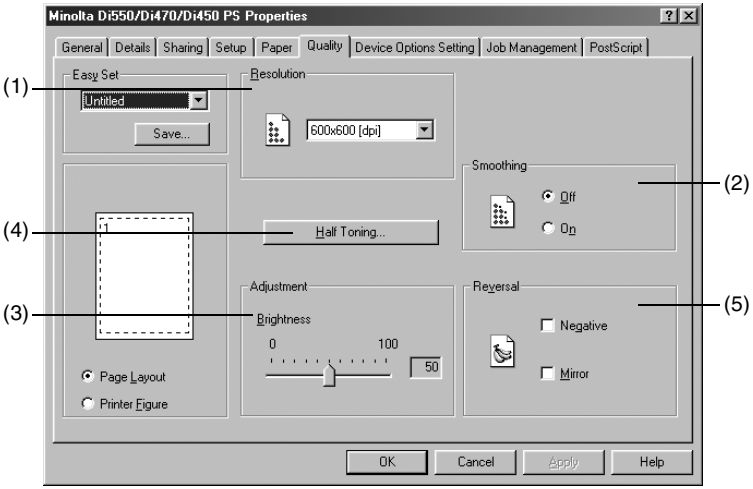
(2) **Smoothing**
Correct the edges of the printed image.
Available settings: On, Off

...

Note for (2)

This function is used with a document whose contents are mainly text. Using the function with a photo image could even dirty the produced image.

PS version



(1) **Resolution**
Refer to PCL6 version.

(2) **Smoothing**
Refer to PCL6 version.

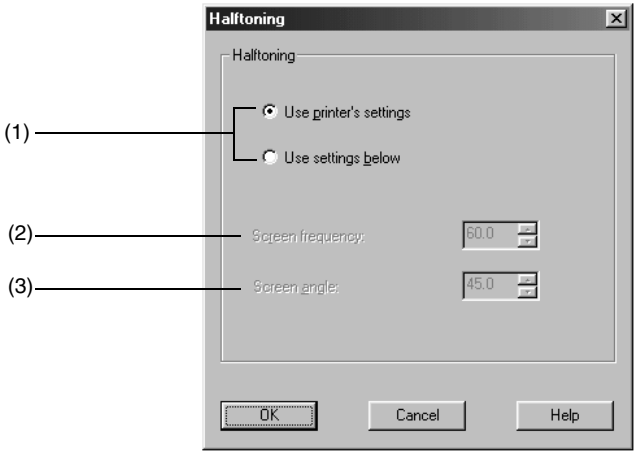
(3) **Brightness**
Perform brightness adjustment.
Setting range: 0 to100

(4) **Half Toning...**
Specify the method of dithering to express gray.

(5) **Reversal**
Specify reversal, Negative or Mirror, or both.

- Negative Reverses black and white.
- Mirror Reverses left and right.

Functions of the Halftoning dialog box



(1) **Halftoning**
Select the method to set halftones.

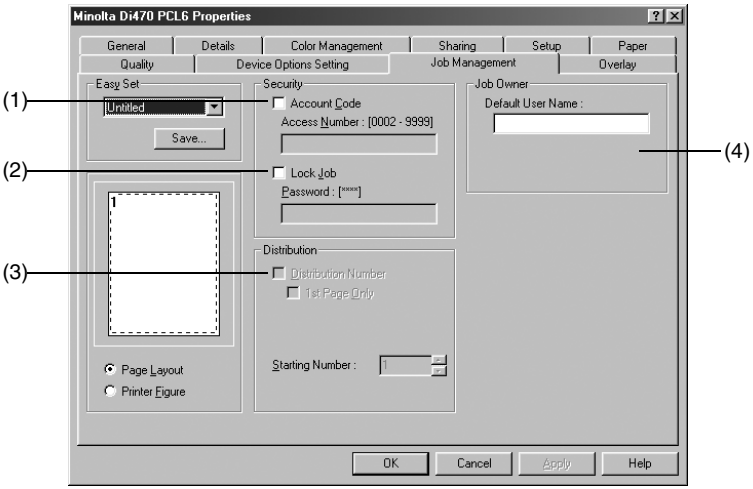
- User Printer's settings — Uses the setting value of the printer when the halftone image is printed. This setting is normally recommended.
- Use settings below — Uses the optional setting value (the setting of optional value) instead of the setting value of the printer when the halftone image is printed. If a moire pattern occurs using Use printer's settings, you should print with adjusting Screen frequency and Screen angle.

(2) **Screen frequency**
Set the number of lines on the screen.
Setting range: 0.1 to 999.9 (in 0.1 steps)

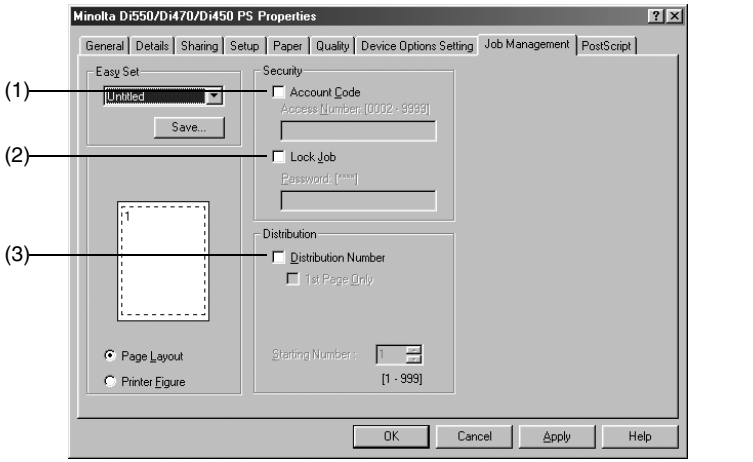
(3) **Screen angle**
Set the screen angle: 0 to 360° (in 0.1° steps)

4.7 Job Management tab

PCL6 version



PS version



(1) **Account Code**
Check this box when using the copy track function. An account code is attached to each printing job, enabling you to carry out management at the machine. In order to use this function, copy track function must be set at the machine.
When the copy track function is set at the machine, printing may sometimes fail to take place until the access number designated at the machine is correctly set.

- Account Code — Makes the copy track function valid.
- Access Number — Enter the access number set in the machine. Setting range: 0002 to 9999 (4 digits)

(2) **Lock Job**
Check this box when locking a printing job.
When using Lock Job, set a password in Password.
A locked printing job will be printed when it is unlocked using the Job List display on the panel of the machine. In this case, a password is necessary.

- Lock Job — Make the lock job function valid.
- Password — Enter the password of the lock job. Setting range: 0000 to 9999 (4 digits)

(3) **Distribution** <when Hard Disk Drive in Copier is installed>
Specifies adding a distribution in the background during printing, and also sets the conditions for adding distribution number. A distribution number is added for each set of prints.

- Distribution Number — Select the distribution number function.
- 1st Page Only — Select whether to print the distribution number on only the first page, or on all pages.
- Starting Number — Specify the starting number of the distribution numbers to be printed. Setting range: 001 to 999

(4) **Job Owner**

- Default User Name — The user name set in the printer driver is displayed as the job user name on the machine's touch panel. Setting range: 8 characters max

...

Note for (1)

*To clear the **Account Code** function when PCL6 is used, type any number in the **Access Number** box. If no number is typed in the **Access Number** box, the message "Access Number Error" will appear and you might not be able to exit from the function.*

...

Note for (2)

*To clear the **Lock Job** function when PCL6 is used, type any number in the **Password** box. If no number is typed in the **Password** box, the message "Password Error" will appear and you might not be able to exit from the function.*

Notes for (3)

When using this function in combination with the cover page function, if you set printing of the cover page to "No" using the cover page function, and set serial number printing to "Yes", a distribution number will be printed on the cover page.

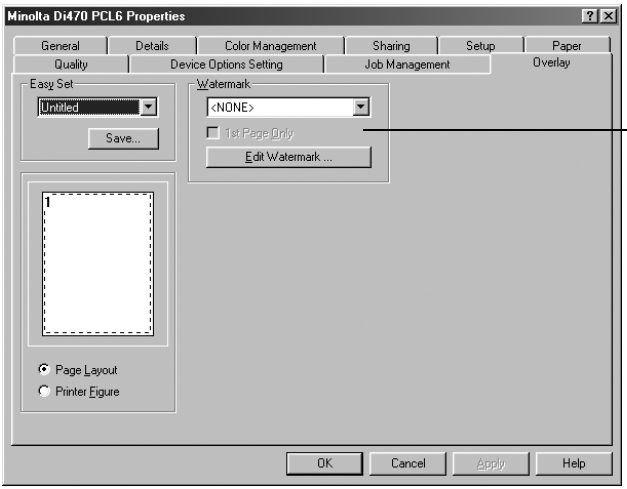
The orientation of the screen sometimes fails to match the orientation of the distribution number.

Tip for (3)

When the distribution number reaches 999, the next number returns to 000.

4.8 Overlay tab

This tab is only displayed with the PCL driver.



(1) **Watermark**
Prints a specific word in the background as a watermark.

- Text — Select the word to be entered as the watermark from the list.
  Available settings:
  NONE, CONFIDENTIAL, COPY, DO NOT COPY, DRAFT, FINAL, PROOF, TOP SECRET, or a word set by the user
- 1st Page Only — Select whether to insert a watermark on only the first page or on all pages.
- Edit Watermark — Set the format, position, and so on, of the watermark characters. For details, see page 4-28.

Notes

*When using this function together with the cover page function, if you set printing to **None** with the cover page function and choose setting to print a watermark on only the first page, the watermark will be printed on the second page.*

This function may not operate with some applications.

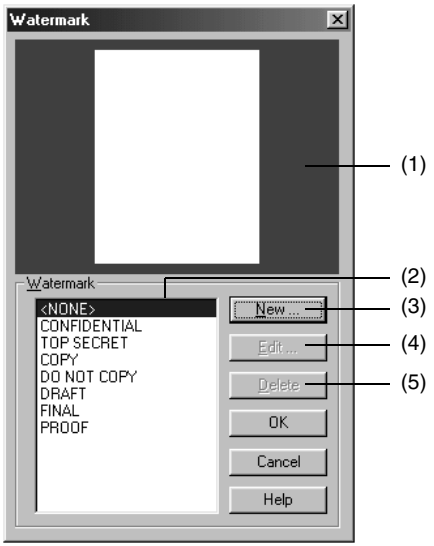
Depending on environment used, contents of Save/Delete will be different: Refer to Appendix A (p. 12-10) for details.

Tip

The condition of the watermark is displayed on the Page Layout.

Functions of the Watermark dialog box

This dialog box allows you to set the text to be inserted using the Watermark function, and also the text style.



(1) **Preview**
This is the watermark preview.

(2) **Name**
Select a registered watermark from the list.

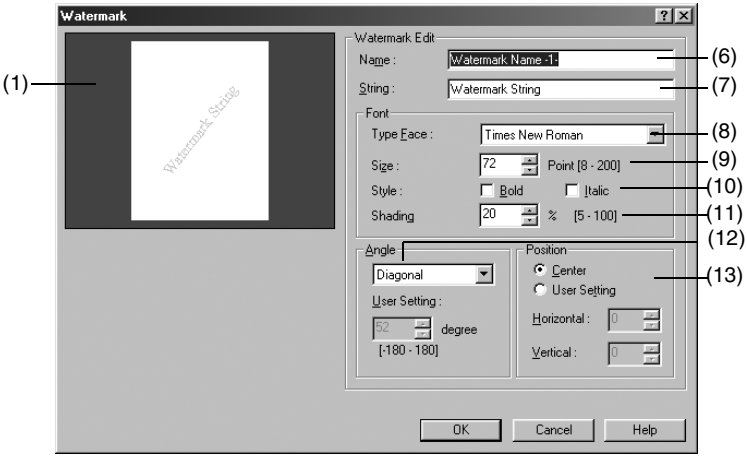
Available settings: <NONE>, CONFIDENTIAL, COPY, DRAFT, FINAL, PROOF, TOP SECRET, DO NOT COPY, user setting

(3) **New**
Used to create new text.
When you select this item, a dialog box for making detailed settings appears.

(4) **Edit...**
Used to edit text selected in (2).
When you select this item, a dialog box for making detailed settings appears.

(5) **Delete...**
Deletes text selected in (2).

Watermark detailed settings



(6) **Name**
Enter the name under which you wish to register the watermark.

Number of registrations	Depending on environment used, number of registrations will be different: Refer to Appendix A (p. 12-10) for details.
Number of characters	max. 20 characters

(7) **String**
Enter the text to be printed as a watermark.

Number of characters	PCL6: max. 63 characters PS: max. 255 characters

(8) **Type Face**
Face Specify a font from String to be printed as a watermark.

PCL6	Specify a font from the fonts (PC font) installed in the OS.
PS	Specify a font from device fonts (controller font).

(9) **Size**
Specify the font size of the characters.

Setting range	8pt to 200 pt (in 1pt steps)

(10) **Style**
Specify the font style of the characters.

• Bold	Prints bold characters.
• Italic	Prints italic characters.

(11) **Shading**
Specify the density of the characters.

Setting range	5% to 100% (in 5% steps)

(12) **Angle**
Specify the angle of the characters with respect to the paper.

- Fixed Angle — Standard fixed angle of the driver.
  Available settings: Horizontal, Diagonal, Vertical, User Setting
- User Setting — If you select User Setting from Fixed Angle, you can set any desired angle.
  Setting range: -180°to +180° (A – (minus) value rotates the characters clockwise, 0 leaves the characters parallel to the paper, and a + (plus) value rotates the characters counterclockwise.)

(13) **Position**
Specify the position at which you wish to print a watermark.

- Center — The watermark is printed at the center of the paper.
- User Setting — You can specify a position by entering numbers in the Horizontal and Vertical boxes.
  Setting values:
  Horizontal: -999pt to 999pt (in 1pt steps)
  Vertical: -999pt to 999pt (in 1pt steps) (72pt = 1inch)

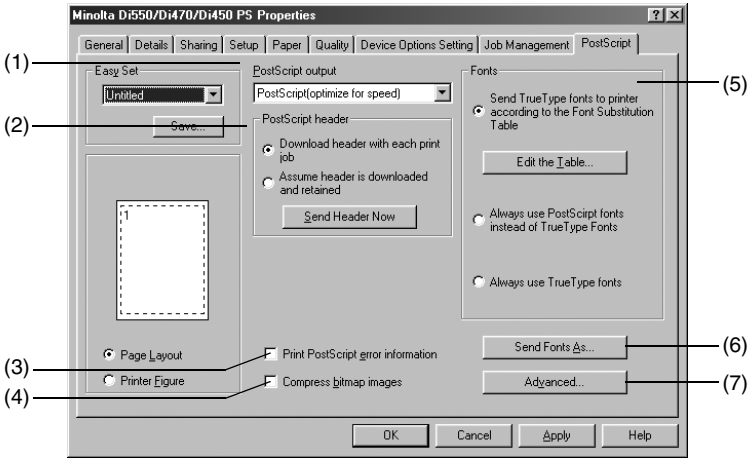
Tips

Specify the position from the center. The Horizontal positive direction is to the right, and the Vertical position direction is upward.

You can check the set contents using (1) Preview.

4.9 PostScript tab

This tab enables you to set all items related to PostScript.



(1) **PostScript output**
Set the output format of PostScript.

- PostScript (optimize for speed) — Performs optimization for faster printing processing.
- PostScript (optimized for portability-ADSC) — Performs optimization for reducing error.
- Encapsulated PostScript (EPS) — Select this item when you wish to embed this file as an image in a document that is to be printed using a different program.
- Archive format — Saves the data stream of PostScript to a file.

(2) **Postscript header**
Set the method of sending the header.

- Download header with each print job — This item sends header information each time a document is printed. We recommend that you use this setting when sharing a network printer.
- Assume header is downloaded and retained — Sends header information only once to the printer, in order to shorten the printing time.
- Send Header Now — Sends header information to the controller.

(3) **Print PostScript error information**
Set the PostScript error information printing.

(4) **Compress bitmap images**
Send graphics in compressed form.

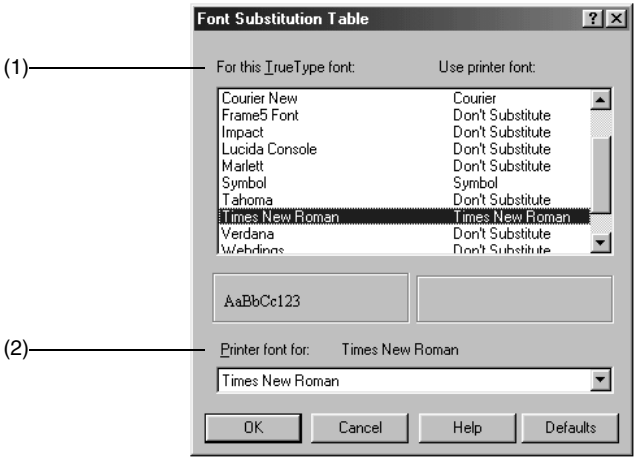
(5) **Fonts**
Set TrueType font.

• Send TrueType fonts to printer according to the Font Substitution Table	Replaces TrueType fonts for the printer fonts, or downloads TrueType fonts in accordance with the Font Substitution Table. For editing the Font Substitution Table, you should open the “Properties...” from the Control Panel and select “Edit the Table” button.
• Edit the Table	Sets the Font Substitution Table.
• Always use PostScript fonts instead of TrueType fonts	Always prints replacing TrueType fonts for the printer fonts. The printing speed becomes faster, but the printed result may not be the same as the display.
• Always use TrueType fonts	Always prints downloading TrueType Fonts to the printer. The printed result will be the same as the display, but the printing speed becomes slower.

(6) **Send Fonts As...**
Sets sending method of fonts.

(7) **Advanced...**
Performs detailed settings of PostScript.

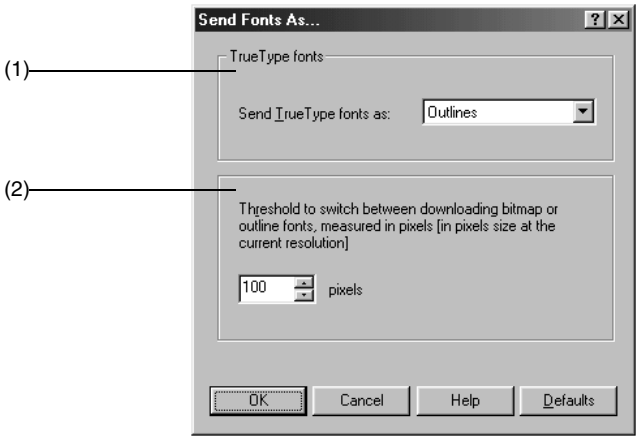
Functions of the Font Substitution Table dialog box



(1) **For this TrueType font**
Used to display and select the substitution table settings.

(2) **Printer font for**
Select the substitution printer font.

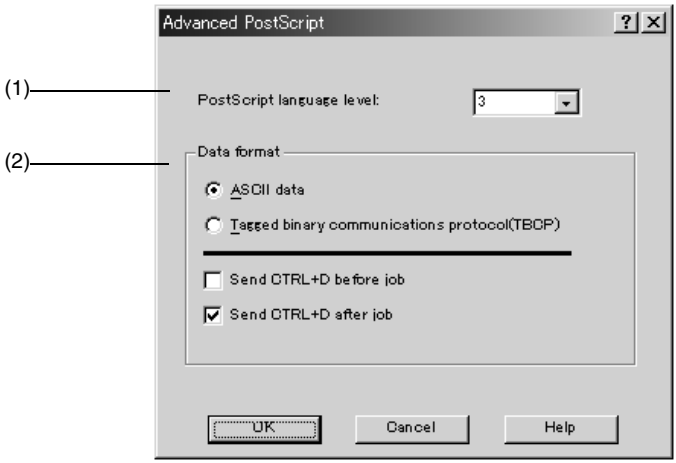
Functions of the Send Fonts As dialog box



(1) **TrueType fonts**
Select the method of sending TrueType fonts.
Available settings: Don't Send, Outlines, Bitmaps, Type42

(2) Set the reference font size of the TrueType font for changing over from a Bitmap font to an Outline font.
Setting range: 0 to 999 pixels

Functions of the Advanced PostScript dialog box



(1) **PostScript language level**
Selects PostScript language level.

Set Value	2: PostScript level 2
	3: PostScript level 3

(2) **Data format**
Sets data format of PostScript.

• ASCII data	Transmits the data in the ASCII format (7-bit). When you select this format, it takes more time for transmission, but any I/O channel, such as the parallel port or the network port, is available.
• Tagged binary communications protocol (TBCP)	Transmits the data in the binary format (8-bit). When the data is transmitted from the parallel port, it can be transmitted faster than in the ASCII format. This binary format is not available when you use the option for the archiving form or create the EPS file.
• Send CTRL+D before job	Transmits Ctrl+D before job.
• Send CTRL+D after job	Transmits Ctrl+D after job.

4.10 Conflicts dialog box

When the Conflicts dialog box appears, it shows the settings that could not be combined with each other. Check the details, and click the **Resolve** button or the **Cancel** button to quit.

Note

Some settings, which are defied by the machine for the restricted combinations of different functions, can at times be accepted by the printer driver. If a print command is issued from the personal computer with such settings made, the machine does not produce the output correctly or abandons the job to produce nothing. Make sure that you make correct settings.

Tip

The dialog box looks slightly differently from this one when Device Options Setting is being set or the PS driver is being used.

5 Printer Driver for Linux

5.1 Installing the printer driver

Operating environment

This section explains the required environment for the printer driver.

Before installing the printer driver, make sure that your computer meets the following requirements. If it does not, the printer driver may not function properly.

Personal computer		IBM PC or a compatible with a Pentium 200MHz or higher CPU
Operating system		Redhat Linux ver.6.1, 6.2 Turbo Linux ver.4.0, 6.0 Open Linux ver. 2.3, 2.4 SuSE Linux ver. 6.3, 6.4
Memory		64MB or more
I/O interface	Parallel	Centronics interface (Conforming to IEEE1284)
	Network	10/100 Base-T (UTP)
Free space on hard disk		2MB or more under /opt

In this section, installation procedure is explained, referring to Redhat Linux. If a different procedure is used (depending on each OS), explanation is separately given for that section.

Installation

This section explains the installation procedure.

X window System is described here.

Note
Before installing the printer driver, quit all other applications.

1 Log in with root when starting OS.

2 Start Terminal window.

3 Install the controller Driver CD-ROM provided with controller in the CD-ROM drive of your personal computer.

4 Copy RPM file to optional directory. The file has been stored in "/Linux/PrintUtility" of the CD-ROM.

5 Input the following command to Terminal window and execute:
rpm –ivh diutil_pack_file

Note
Input file name to "diutil_pack_file".

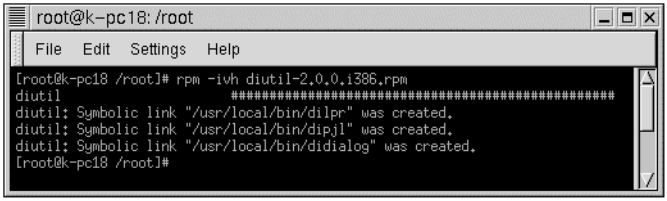
6 Installation will start when the above command has been executed.

Note
The installation procedure shown above cannot be used for the following Operating Systems. Use the installation procedure given on the next page:

Open Linux ver. 2.4

SuSE Linux ver. 6.4

After installation is complete, the screen shown below will appear.



If an error is output during installation, execute the following commands in sequence:

rpm -ivh diutil_pack_file --nodeps

ln -s /usr/lib/libtcl8.0.so /usr/lib/libtcl.so

ln -s /usr/lib/libtk8.0.so /usr/X11R6/lib/libtk.so

ldconfig -n /usr/lib/

ldconfig -n /usr/X11R6/lib/

Note
Input file name to “diutil_pack_file”.

By executing the above commands in sequence, installation can be performed correctly.

5.2 Printer setting with X window System

Making general settings before using the printer

The printer driver requires setting of items that are common to all print jobs, including the port to which the printer cable is connected and any optional devices configured with the machine: Note that these settings must be made only after the printer driver has been installed.

See page 5-19 if you refer to Device Options Setting in dialog box.

Redhat Linux

With Redhat Linux, setting is performed from **Printer Configuration** in the control panel. The following shows how to display **Printer Configuration**:

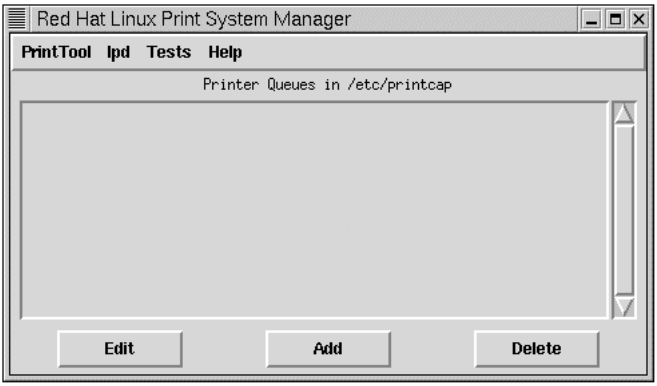
...

Tip

*With Redhat Linux, **Printer Configuration** window can also be displayed by executing **printtool** command from Terminal window.*

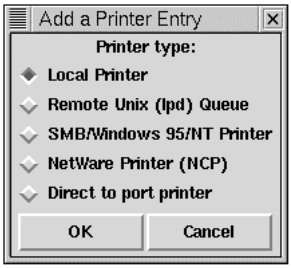
1 Click menu button and open **System** – **Control Panel**.

2 When control panel is opened, click the **Printer Configuration** button. Printer system manager will open.



3 First, click the **Add** button of the printer manager.

4 When the personal computer has been directly connected to the machine, select **Local Printer**.



...

Note

If you install a printer driver to the computer which has been connected via network, be sure to consult the network administrator.

To the network administrator: When the setting of the driver is to be selected via network with Remote Printer, Remote Unix (1pd) Queue, etc., printer queue, printer name, IP address, etc. are necessary. Input "PORT1" for printer queue.

5 The printer device will be detected. Click the **OK** button.
If not detected, check to see if the port is already in use.

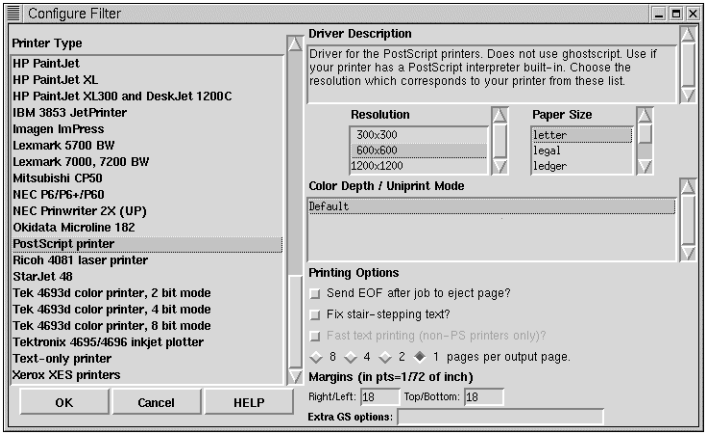
Note

When network connection has been selected, detection result dialog box will not be output.

6 Edit screen will open. First, set optional printer name.

7 Specify the SPOOL directory to be prepared: It is acceptable to leave default value as it is.

8 Click the **Select** button of input filter, and select **PostScript Printer** here. No other settings are required.



9 Click the **OK** button.

10 Click the **OK** button in edit window of the printer to complete setting.

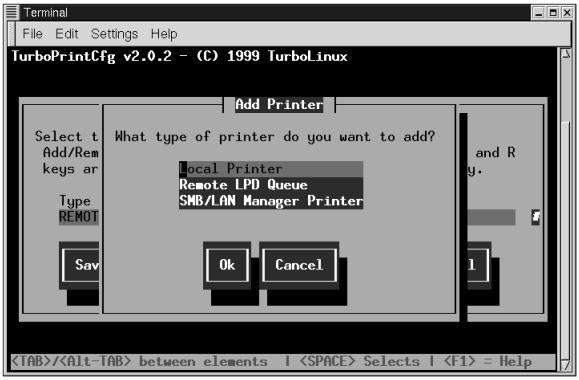
Turbo Linux

With Turbo Linux, execute command from Terminal window for setting printer. The following shows the display method of the setting screen:

1 First, execute **turboprintcfg** command from Terminal window: Terminal window will change to printer setting screen.

2 Select the **Add** button.

3 Select **Local Printer** for printer type.

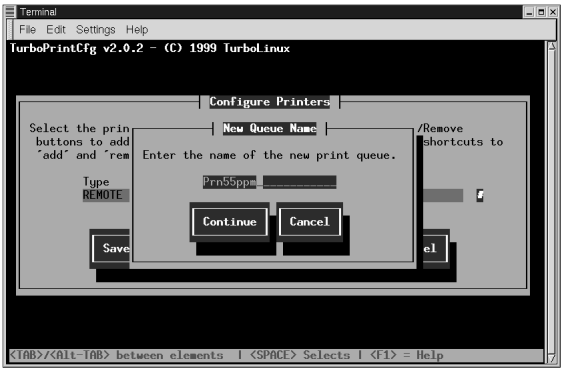


...

Note

*When network printer is to be used, select **Remote LPD Queue**.*

4 Specify optional name for printer queue.



5 Make sure that positions where SPOOL directory is to be prepared and printer device are specified. After checking is complete, select the **OK** button.

Note

When setting is performed using network printer, LPD setting (Remote Hostname, Remote Queue) should be made in addition to above setting. Input "PORT1" for Remote Queue.

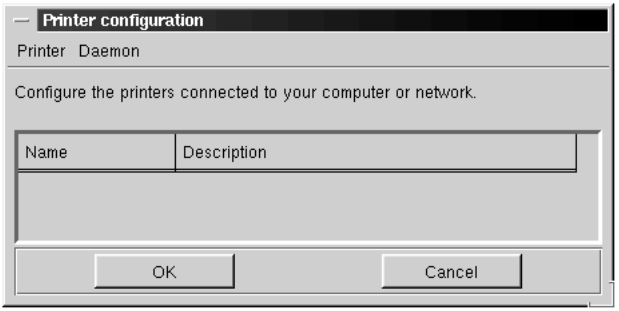
With Turbo Linux4.0, some other setting should be made on Edit Printer Setting screen. For setting of printer type, select ***Postscript Printer****. Other settings can be left as default settings.*

6 Select the **Save & Exit** button to complete setting.

Open Linux

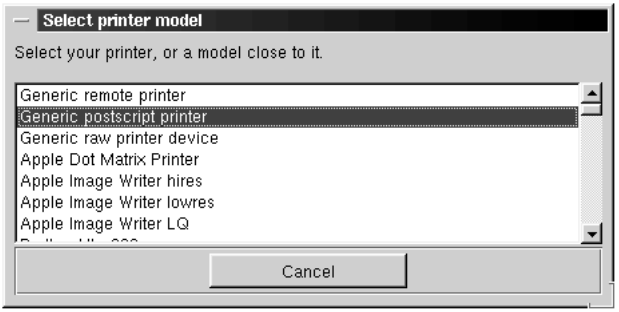
With Open Linux, printer setting can be performed using dialog box. The setting method using dialog box is given here.

1 Open **KDE** menu. Select **COAS** – **Peripherals** – **Printer**.
The dialog box shown below will appear.



2 Select **Add** from **Printer** at the left top on the dialog box.

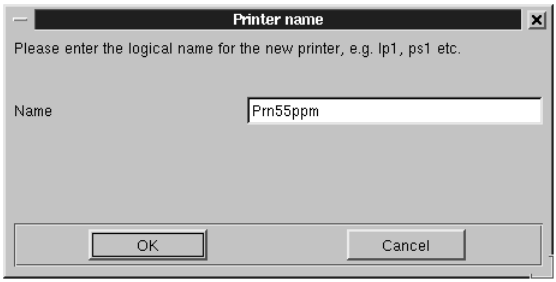
3 Select printer model dialog box will appear. Select **Generic post-script printer**.



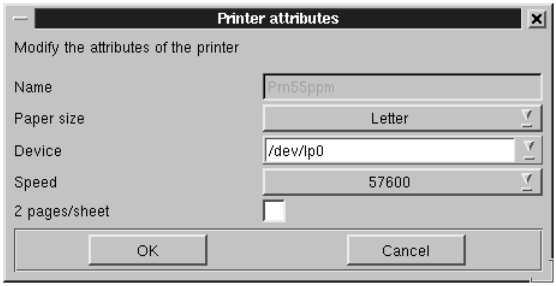
Note

*Whenever network printer is to be used, select **Generic remote printer**. At this time, input "PORT1" for Remote Queue.*

4 Printer name dialog box will appear: Input optional name and click the **OK** button.



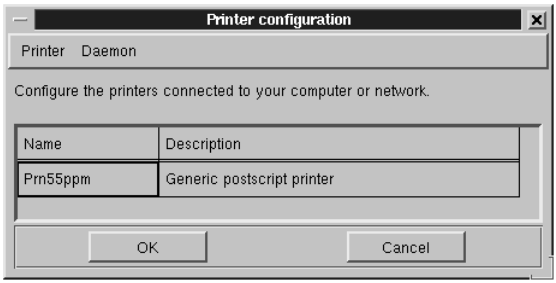
5 Printer attributes dialog box will appear: Make certain that correct device is displayed here, but do not change any other items.



6 Select the **OK** button.

7 System will ask you whether to save changes, to create printer queue, etc.: Select the **OK** button.

8 Return to Printer Configuration dialog box. Once the added printer is displayed, select the **OK** button to complete.

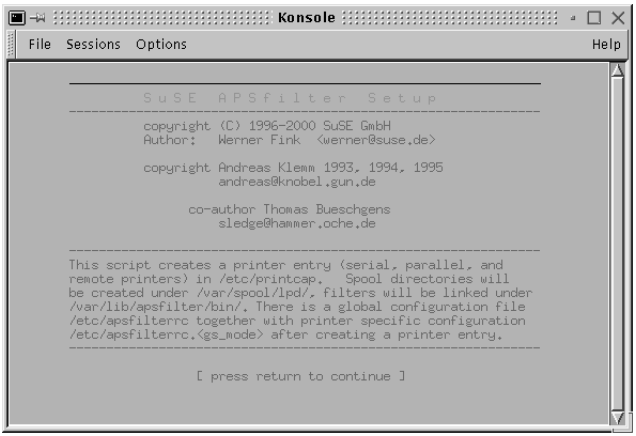


SuSE Linux

With SuSE Linux, command should be executed from Terminal window to set printer.

1 Execute command shown below from Terminal window with current directory:
/var/lib/apsfilter/SETUP

Terminal window will change as shown below after execution of command.



2 Screen will change as shown below by pressing the return key. Select **Entry** – **Device**.

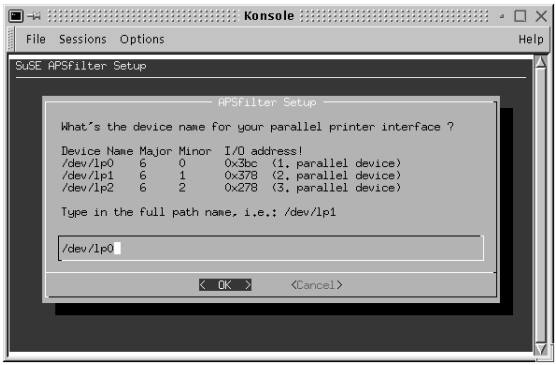
3 Printer interface setting screen will appear. Select **Parallel**.

...

Note

*When network is used, select **Remote** instead of **Parallel**. Then, set HostName and printer queue. Input "PORT1" for printer queue.*

4 Make sure that Interface is set to parallel port.

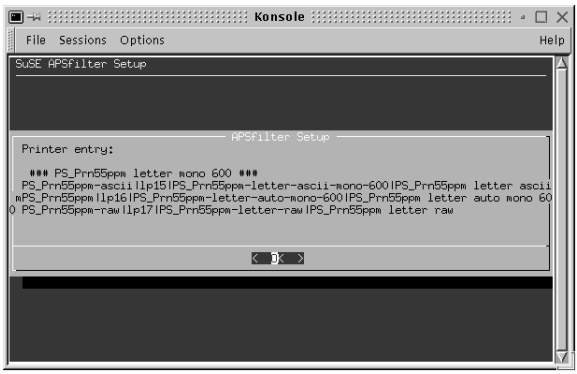


5 Screen for specifying each setting will appear. Select **Postscript** for printer type.

Screen will change to resolution setting screen, but it is not necessary to change from default value.

6 Specify printer name, paper and color.

7 Select the **Add** button for complete. Confirmation screen will appear.



How to display Printer Utility dialog box

If you use X window, printer utility setting can be specified from dialog box. Dialog box can be displayed only with command operation, so **didialog** command is used here.

Input the following command on the Terminal window and execute: The dialog box will appear.

/opt/diutil/bin/didialog –m [Model name] –P [Printer name] –a [Area]

- Specify the printer name which was designated during setting.
- Input model name (di550) for [Model name].
- Specify [Area]; select [us] for Inch area, [ec] for Metric area.

Refer to “5.3 Properties settings” (p. 5-18) for setting method concerning the printing.

Tip

Specifying [Model name] and [Area] is necessary only when didialog command is executed first.

dipjl command

dipjl command is a printer setting command used for environment in which X window cannot be used: Refer to “dipj1.1” file in “/opt/diutil/man/manl” for detailed description. To display “man” file, execute the following command:

man /opt/diutil/man/manl/dipj1.1

Note

If you are able to use X window environment, this command is not necessary.

Since the settings using this command are only temporary settings for printing, they cannot be saved.

Printing method (dilpr command)

dilpr command is used for printing method. Printing of PS file is performed by executing this command. Note that this cannot be printed from application. Refer to “dilpr.1” file in “/opt/diutil/man/manl” for detailed description. To display “man” file, execute the following command.

man /opt/diutil/man/manl/dilpr.1

Example option of dilpr command

-P printer name: Specifies printer name

-y set option: Used when a particular part of set option is to be changed.

-J Job name: Set when a name other than file name is to be set as a job name.

Example of printing method

/opt/diutil/bin/dilpr –P [Printer name] [File name]

Note

With this command, only PS file can be printed. Non-PS files must be converted to PS for printing.

groff command, etc. can be used to convert to PS file.

didialog command

didialog command is used to display dialog box for setting printer utility. Refer to “didialog” file in “/opt/diutil/man/manl” for detailed description. To display “man” file, execute the following command:

man /opt/diutil/man/manl/didialog.1

Example of dialog box display method

/opt/diutil/bin/didialog –m [Model name] –P [Printer name] –a [Area]

Tip

Specifying [Model name] and [Area] is necessary only when didialog command is executed first.

5.3 Properties settings

Description of each tab

Each tab enables you to change the settings indicated below. For a detailed description of each function, see the corresponding reference page.

Property tab	Outline of settings that can be changed	Reference page
Setup	Allows you to set the paper take-up tray and paper exit tray. Also allows you to set high level printing functions such as two-sided printing, OHP interleaving, Cover Mode, Staple, Punch, and Folding.	p. 5-23
Paper	Allows you to set basic printing items such as number of copies, paper size and print orientation. Also allows you to set functions related to sorting.	p. 5-31
Device Options Setting	Allows you to set option equipment installed on the machine.	p. 5-19
Job Management	Sets the copy track function. Allows you to lock a printing job. Also allows you to print the distribution number.	p. 5-33
–	Allows you to save and read the contents of the settings on a Setup, Paper, Job Management or Device Options Setting property sheet.	p. 5-21

Note

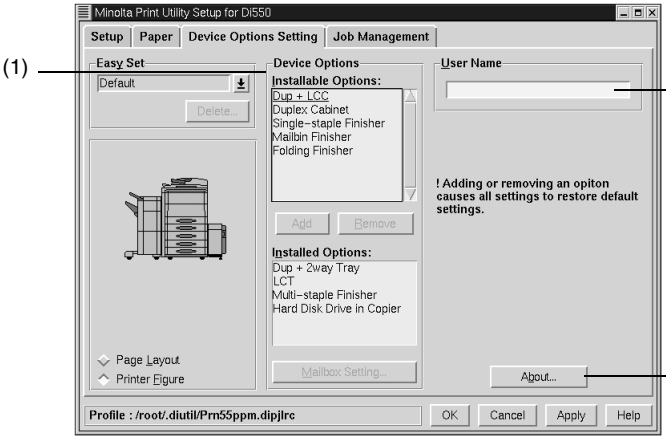
Refer to "5.2 Printer setting with X window System" (p. 5-4) for the procedure for displaying "dialog box."

Differences between each OS are indicated based on Redhat Linux ver. 6.2.

Details of OS-dependent functions are not given.

Device Options Setting tab

This tab allows you to set the options installed on the machine. Be sure to select the options correctly otherwise some functions may be unusable or printing may not take place correctly. The settings must match the machine configuration.



(1) **Device Options**
Set the options installed in the machine.

- Installable Options — This is a list of installable options. Select the desired options from this list.
  Available settings:
  Duplex Cabinet, Dup + 2way Tray, LCT, Dup + LCC, Mailbin Finisher, Multi-staple Finisher, Single-staple Finisher, Folding Finisher, Hard Disk Drive in Copier
- Add — Pressing this button adds the selected option.
- Remove — Pressing this button removes the selected option.
- Installed Options — This is a list of currently installed options. Select it when you wish to remove an option.
- Mailbox Setting — <when Mailbin Finisher is installed>
  You can add a name to each mailbin of Mailbin Finisher. For details, see page 5-20.

(2) **User Name**
The user name set in the printer driver is displayed as the job user name on the machine's touch panel. Setting range: 8 characters max.

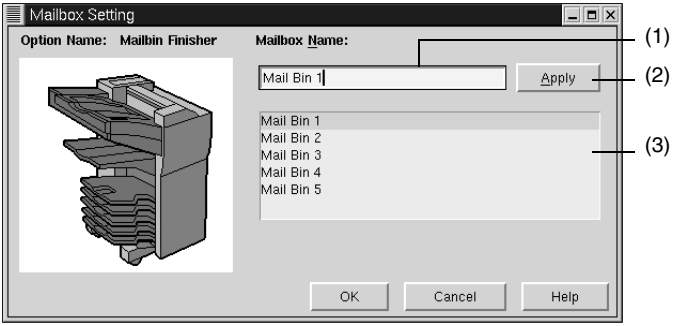
(3) **About...**
Click to display the manufacturer and version number of the printer driver.

Note

If the Dup + 2way Tray, Dup + LCC, and Duplex Cabinet are not correctly selected, it may not be possible to select the Finisher correctly.

Mailbox Setting dialog box
<when Mailbin Finisher is installed>

Allows you to set the names of the mailbins in Mailbin Finisher.



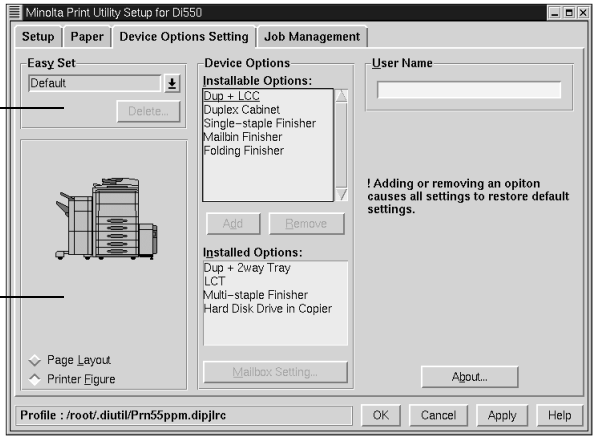
(1) **MailBox**
This is the bin name editing box.
Setting range: max. 32 characters

(2) **Apply**
Press to finalize a changed name.

(3) **Bin list**
Displays a list of names of currently set bins.
To change the name of a bin, select the name to be changed.

Functions that are common to various tabs

These functions are common to tabs from **Setup** tab to **Job Management** tab.



(1) **Easy Set**
Allows you to call and use the settings stored in each tab.

- Easy Set Name — Allows you to call the settings stored in each tab.
- Save (Delete) — Used to save/delete the settings of tabs. When you touch the **Save** button to save the contents of a tab, the Save Easy Set Name dialog box appears. For details, see page 5-22.
  When you touch **Delete**, the stored set contents are deleted.

(2) **Paper preview/Machine preview**
Allows you to display/change over the paper preview and machine preview.

- Page Layout — The layout of the printed data on a single page is displayed as an image. This allows you to check the status for two-sided printing, for example.
  See page 12-12 for the Page Layout list.
- Printer Figure — When the paper take-up tray and the paper exit tray are set, the paper take-up tray and paper exit tray are displayed in green.
  See page 12-15 for the Printer Figure list.

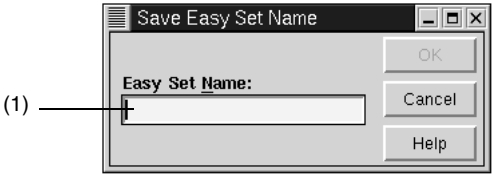
Tip
*If the set contents were changed, the **Save** button will appear.*

*If the set contents are the Easy Name contents, the **Delete** button will appear.*

Functions of the Save Easy Set Name dialog box

Use to save print setting data.

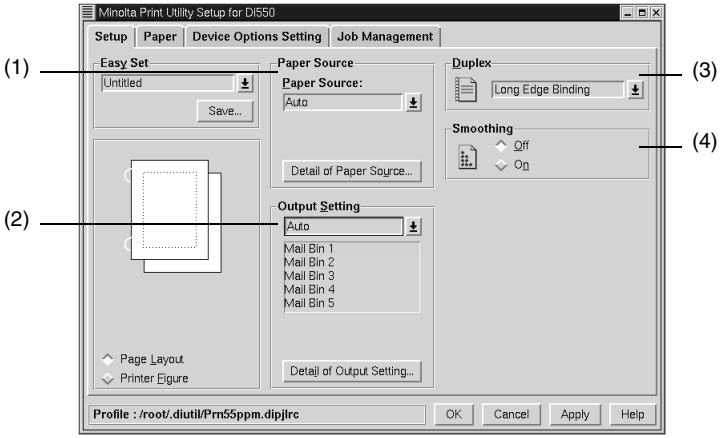
Before pressing the **Save** button, set the contents of each tab.



(1) **Easy Set Name**
Add a name to the stored contents.
Number of registrations: 32 max.
Number of characters: 10 characters max.

Setup tab

This tab allows you to set the paper take-up tray, paper exit tray and various high grade printing functions.



(1) **Paper Source**
Selects the machine tray to be used.
Sets the cover page function and the OHP interleaving function.

- Paper Source — Select the machine tray to be used.
  The selectable paper sizes are limited by the types of paper take-up trays installed in the machine.
  Available settings: Auto, Manual Feed, Tray1 to 4, LCC, LCT
- Detail of Paper Source — Set the cover page function and OHP interleaving function. For details, see page 5-26.

(2) **Output Setting**
This function selects the tray in the machine to which the paper is to be exited. Settings can also be made for finishing functions including stapling, hole punching, and folding.

- Paper exit destination — Select the machine tray to which you wish to exit the prints.
  The selectable paper exit trays are limited by the type of finisher installed in the machine.
  Mailbin Finisher: Auto, Mailbin
  Excepting Mailbin Finisher: Auto
- Mailbin paper exit destination — If Mailbin is selected as the paper exit destination, set the mailbin to which you wish to exit the paper.
- Detail of Output Setting — Set stapling, punching or folding. For details, see page 5-28.

(3) **Duplex** <when Dup + 2way Tray, Dup + LCC or Duplex Cabinet is installed>
Specifies two-sided printing.

- Off — Not set

- Short Edge Binding — Two-sided printing takes place in such a way that the short edge is bound.
- Long Edge Binding — Two-sided printing takes place in such a way that the long edge is bound.

(4) **Smoothing**
Correct the edges of the printed image.
Available settings: On, Off

Note for (1)
Some paper sizes cannot be selected. For details, refer to the User Manual of the machine.

Tip for (1)
*Set the paper take-up tray using **Device Options Setting**.*

The paper take-up tray used is displayed in green on the Printer Figure.

Note for (2)
Some paper sizes cannot be selected. For details, refer to the User Manual of the machine.

Tip for (2)
*Set the type of finisher using **Device Options Setting**.*

The paper take-up tray used is displayed in green on the Printer Figure.

Note for (3)
If you print a document that contains pages of different sizes and/or different directions in the same job, the image may be partially cut or images may overlap each other.

Two-sided printing and OHP interleaving cannot be set simultaneously.

Tip for (3)

The sizes for which you can perform two-sided printing are from 140 × 182mm to 297 × 432 mm.

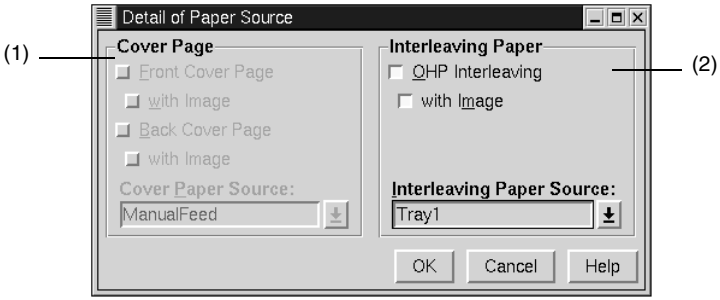
Short Edge Binding and Long Edge Binding are displayed on the Page Layout.

Note for (4)

This function is used with a document whose contents are mainly text. Using the function with a photo image could even dirty the produced image.

Functions of the Detail of Paper Source Dialog Box

This function sets the cover page function and the OHP interleaving function.



(1) **Cover Page**
This function is used to print a document with front and back cover pages. You can print on the front cover, or leave it blank.

- Front Cover Page — Activates the front cover function.
- with Image (Front Cover Page) — Prints on the front cover.
- Back Cover Page — Adds a back cover.
- with Image (Back Cover Page) — Prints on the back cover.
- Cover Paper Source — Select the tray for the front cover and back cover papers. Available settings: Tray1 to Tray4, LCC, LCT, Manual Feed.

(2) **Interleaving Paper**
This function inserts sheets (interleaving sheets) between sheets of OHP film when printing on OHP film. You can either leave these sheets blank or print the same image as that printed on the OHP film.

- OHP Interleaving — Activates the OHP interleaving function.
- with Image — Prints an image on the interleaving sheet.
- Interleaving Paper Source — Select the tray for the interleaving paper. Available settings: Tray1 to Tray4, LCC, LCT

...

Note for (1)

When using special paper such as thick paper, the paper sometimes fails to be exited to the selected paper exit destination.

You can set Tray1 to Tray4, LCC, LCT and Manual Feed using "Paper Source".

...

Tip for (1)

The tray containing the paper on which the body of the document is to be printed is displayed in green on the Printer Figure.

...

Note for (2)

When using the OHP interleaving function, set the number of sets of prints to "1".

*You cannot select the same paper take-up port for both **Paper Source** and **Interleaving Paper Source**.*

*You can set only **Manual Feed** using **Paper Source**.*

OHP interleaving and two-sided printing cannot be set simultaneously.

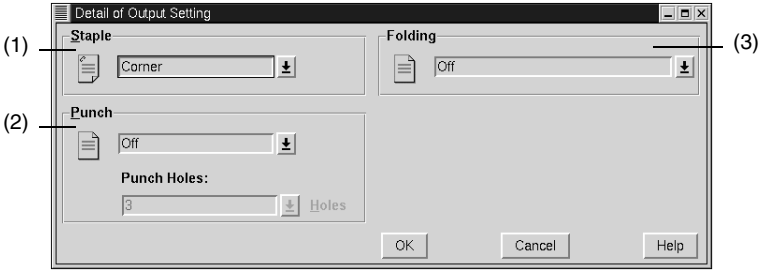
...

Tip for (2)

The OHP film tray is displayed in green on the Printer Figure.

Functions of the Detail of Output Setting Dialog Box

Settings can also be made for finishing functions including stapling, hole punching, and folding.



(1) **Staple** <when Mailbin Finisher, Single-staple Finisher, Multi-staple Finisher or Folding Finisher is installed>
This function allows you to staple one set of printed documents at a time.

- Off — Printed documents are not stapled.
- Corner — Printed documents are stapled at their corners.
- Long Edge — <when Multi-staple Finisher or Folding Finisher is installed> The documents are stapled along the long edge.
- Short edge — <when Multi-staple Finisher or Folding Finisher is installed> The documents are stapled along the short edge.
- Center — <when Folding Finisher is installed> The documents are stapled at the center.

(2) **Punch** <when Mailbin Finisher, Multi-staple Finisher or Folding Finisher is installed>
This function allows you to punch holes in the printed document.

- Off — The document is not punched.
- Short Edge — The document is punched along the short edge.
- Long Edge — The document is punched along the long edge
- Punch Holes <Inch area only> — Set the number of holes to be punched.

(3) **Folding** <when Folding Finisher is installed>
Select the desired paper folding function.

- Off — Printed pages are not folded.
- Just Output Size [Z-Fold] — Printed pages are folded into three parts.
- Half Folding — Printed pages are folded in two at their center.
- Crease — A crease is made in printed pages.

Note for (1)

If "Staple" is set, printed pages are fed out into the Elevator Tray.

The stapling position is either the top left corner or the top right corner depending upon the direction of the paper and the printing direction.

If the capacity of Mailbin Finisher, Single-staple Finisher, Multi-staple Finisher or Folding Finisher is exceeded, the stapling operation may be canceled. Refer to the User Manual of the machine.

If you print a document consisting of pages of different sizes in the same printing job, stapling may be canceled.

Be careful when printing a document consisting of pages facing different directions because the stapling position will be determined by the direction of the first page.

You cannot set certain sizes and kinds of paper. For details, refer to the User Manual of the machine.

Tip for (1)

You can check the stapling position by using the icon in the dialog box or Page Layout.

Note for (1)

Number of punch holes can be specified only when Multi-staple Finisher is installed.

You cannot punch certain sizes of paper. Also, you may be unable to punch the paper at certain positions. For details, refer to the User Manual of the machine.

If you select Long Edge in the manual bypass take-up mode, the paper may sometimes fail to be punched.

Punch and OHP interleaving cannot be set simultaneously.

***Punch Holes** is not displayed for Metric area.*

Tip for (2)

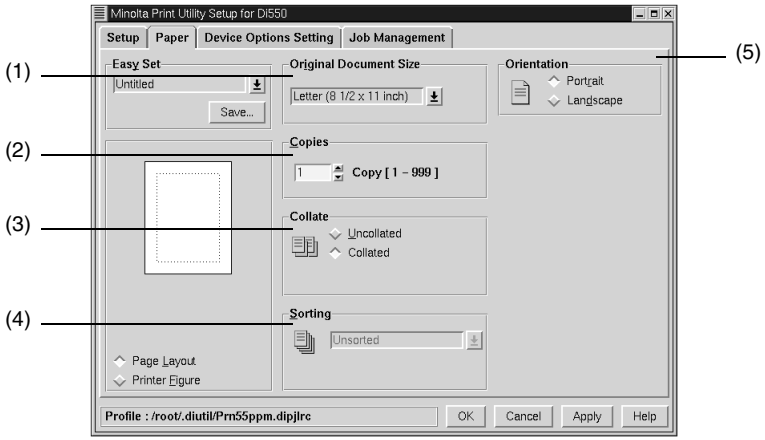
You can check the punching positions by using the icon in the dialog box or Page Layout.

Note for (3)

If Folding is combined with Hole-Punch or Staple, the Hole-Punch or Staple function to be used is restricted depending on the specific type of the Folding function combined. For details, see Appendix A (p. 12-7).

Paper tab

The **Paper** tab allows you to make basic printer settings.



(1) **Original Document Size**
Sets the Original Document Size.

- Paper size — Select the Original Document Size.
  Available settings:
  Letter, Legal, Executive, A3, A4, A5, A6, JIS B4, JIS B5, JIS B6, Invoice, Ledger, 11 × 14, FLS1, FLS2, FLS3, FLS4

(2) **Copies**
Specify the number of sets of prints to be made. Enter the value either directly or by pressing ▲ or ▼.

Setting range: 1 to 999 sets

(3) **Collate**
Use this function when making multiple sets of prints of the same document, to specify whether or not to print one set at a time.

- Uncollated — All of the pages are simply printed one after the other. For example, if you make five sets of prints, each page is printed in sequence five copies at a time.
- Collated — Prints are output one set at a time. For example, if you make five sets of prints of a 10-page document, the prints will be output one set at a time.

(4) **Sorting**
Select the sorting method.

- Unsorted — Prints are not sorted.
- Sorted — Prints are sorted.

(5) **Orientation**
Select the orientation of the image. You can check the selected direction using Page Layout.

- Portrait — Printing takes place lengthwise.
- Landscape — Printing takes place crosswise.

Note for (1)

If you select a size of paper not loaded in the machine or Manual Feed, the machine will give a message prompting you to add paper to Tray1, Tray2, or Manual Feed and enter into a standby state.

Note for (2)

When using the OHP interleaving function, set the number of sets of prints to 1.

Note for (3)

Keep Collate (Sort) on the application side set to OFF at all times.

Tip for (4)

If you exit prints to the Elevator Tray when the Single-staple Finisher, Multi-staple Finisher or Mailbin Finisher is installed, the prints are exited in a sawtooth manner.

When the Folding Finisher is installed or if none of the finishing options is installed, the prints are exited in a criss-cross manner.

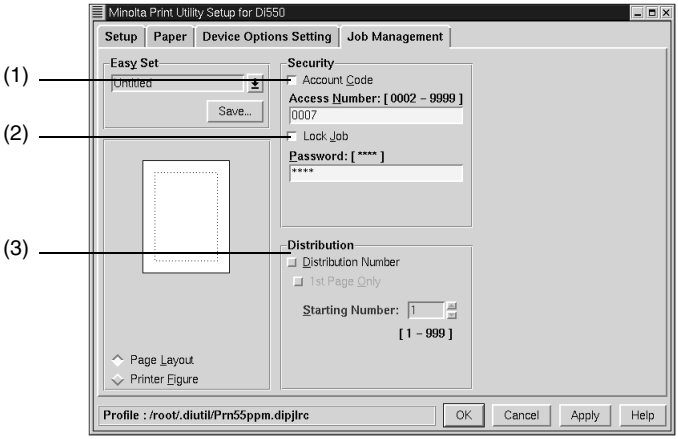
The following are the minimum requirements for permitting criss-cross sorting using the Collated setting.

- *Stacks of paper of the same size are loaded in the lengthwise and crosswise directions.*
- *The Staple, Punch or Cover mode is not set.*

Tip for (5)

A Portrait or Landscape print appears on the Page Layout.

Job Management tab



(1) **Account Code**
Check this box when using the copy track function. An account code is attached to each printing job, enabling you to carry out management at the machine. In order to use this function, copy track function must be set at the machine.
When the copy track function is set at the machine, printing may sometimes fail to take place until the access number managed at the machine is correctly set.

- Account Code — Makes the copy track function valid.
- Access Number — Enter the access number set in the machine. Setting range: 0002 to 9999 (4 digits)

(2) **Lock Job**
Check this box when locking a printing job.
When using Lock Job, set a password in “Password.”
A locked printing job is printed when it is unlocked using the Job List display on the panel of the machine. In this case, a password is necessary.

- Lock Job — Make the lock job function valid.
- Password — Enter the password of the lock job. Setting range: 0000 to 9999 (4 digits)

(3) **Distribution** <when Hard Disk Drive in Copier is installed>
Specifies to add a distribution in the background during printing, and also sets the conditions for adding distribution number.
A distribution number is added for each set of prints.

- Distribution Number — Select the distribution number function.
- 1st Page Only — Select whether to print the distribution number on only the first page, or on all pages.
- Starting Number — Specify the starting number of the distribution numbers to be printed. Setting range: 001 to 999

Note

*When using this function in combination with the cover page function, if you set printing of the cover page to **No** using the cover page function, and set serial number printing to **Yes**, a distribution number will be printed on the cover page.*

The orientation of the screen sometimes fails to match the orientation of the distribution number.

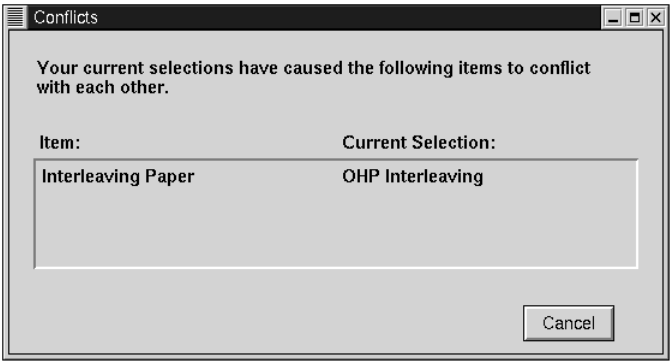
Tip

When the distribution number reaches 999, the next number returns to 000.

Conflicts dialog box

The Conflicts dialog box, like the one shown below, appears when a setting that conflicts with another made previously is made on a tab.

When the following dialog box appears, it shows that the currently selected settings conflict with each other.



When the Conflicts dialog box appears, it shows the settings that could not be combined with each other. Check the details, and click the **Cancel** button to quit.

...

Tip

The dialog box looks slightly differently from this one when Device Options are being set or the PS driver is being used.

...

Note

Some settings, which are defied by the machine for the restricted combinations of different functions, can at times be accepted by the printer driver. If a print command is issued from the personal computer with such settings made, the machine does not produce the output correctly or abandons the job to produce nothing. Make sure that you make correct settings.

6 Printer Driver for Macintosh

6.1 Installing the printer driver

Operating environment

Before installing the printer driver, make sure that your computer meets the following requirements. If it doesn't, the printer driver may not function properly.

Operating system	Apple Macintosh System 7.5.3 or later, 8.x, 9.x or Mac OS X 10.2 or later
Personal computer	Apple Macintosh computer or a Macintosh-compatible computer
I/O interface	Ethernet port
Memory	16MB or more
Disk drive	CD-ROM drive is required for installation only.
Free space on hard disk	2MB or more
Recommended printer software	LaserWriter 8.5.1. or later, LaserWriter 8.6 or later

Note
Do not use an Ethernet cable of low quality: Defective printing could result.

Installation (Macintosh OS 7/8/9)

This section explains the installation procedure for the Macintosh printer driver under Macintosh OS 7, 8 or 9.

Note
For details on the procedure for installing the printer driver on a Mac operating system, refer to "Installation (Mac OS X)" on page 6-9.

The following procedures are concerned with Apple Macintosh system 7.5.5 and LaserWriter 8.5.1.

Note

When OS with other version or LaserWriter is used, procedures may vary slightly.

Make sure that the controller and computer are properly connected to each other with an Ethernet cable.

1 Turn ON the machine.

2 Turn ON the computer and start the Macintosh OS.

3 Install the printer controller CD-ROM in the CD-ROM drive of your computer.

4 Double-click the **Macintosh HD** icon on the desktop.

5 Double-click the **System Folder**.

6 Double-click **Extensions** folder.

7 Double-click **Printer Description** folder.

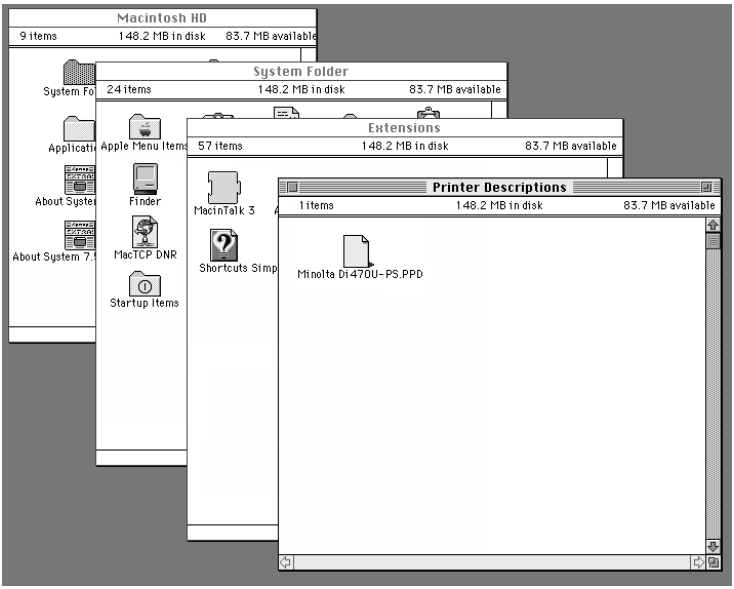
8 Drag the **Minolta Di****-PS.ppd** file in the **PPD** folder of the CD-ROM to the **Printer Description** folder opened in step 7 to copy the file.

Note

Specify proper file according to the machine used.

*Minolta Di****-PS.ppd*

- Specification (U: Inch area, E: Metric area)
- Model name of the machine



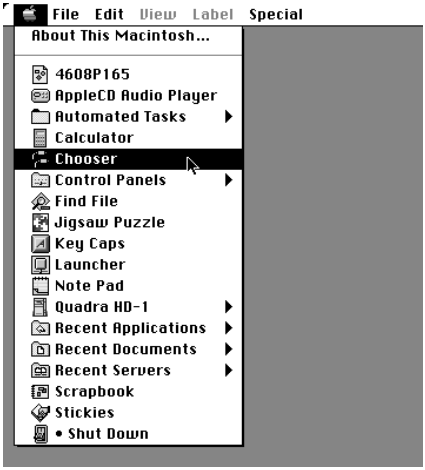
9 Remove the CD-ROM from the CD-ROM drive.

10 Select **Chooser** from the Apple menu.

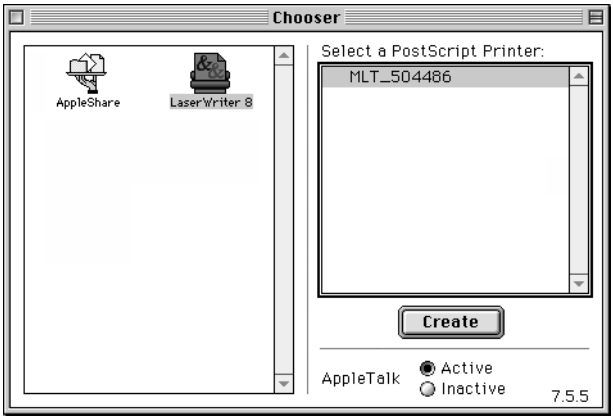
...

Note

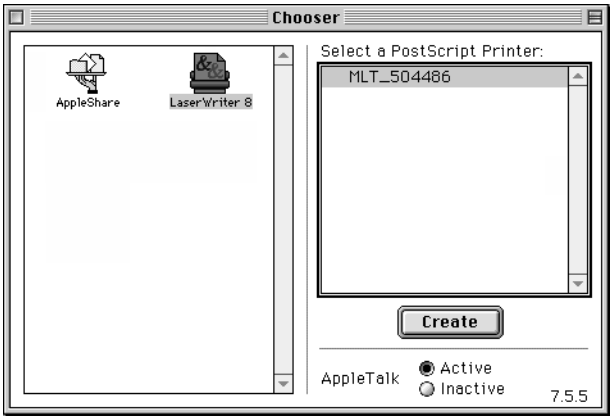
The steps that follow will apply when the LaserWriter printer driver has previously been installed in the Macintosh computer.



11 The Chooser dialog box will appear.
Click the **LaserWriter** icon.



12 The printer name set up with the NIC appears in the list under **Select a PostScript Printer.** Select the printer and click the **Create** button.

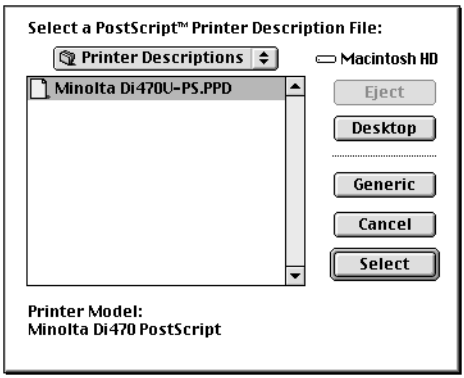


13 The Select a PostScript™ Printer Description File dialog box will appear.
Select **Minolta Di470U-PS.ppd** from the dialog box and click the **Select** button.

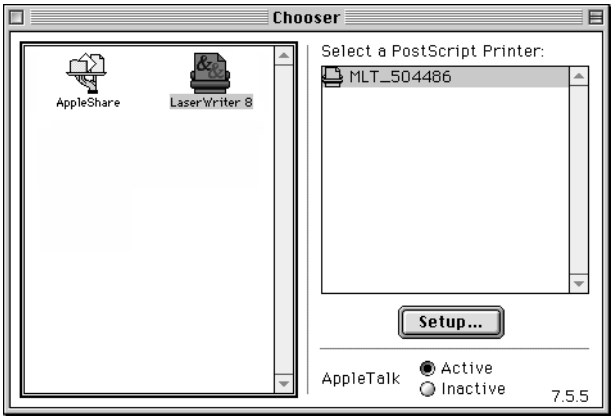
...

Note

The following procedure is explained for Di470, specified for inch area, as an example: Use by specifying proper file according to the machine used.

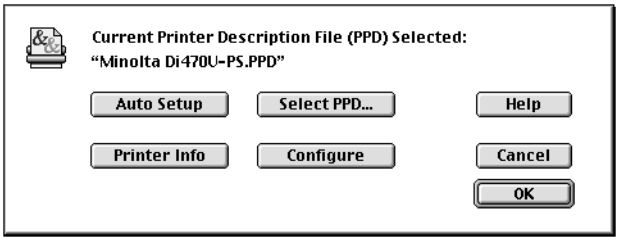


14 After the installation procedures have been completed, a small printer icon will appear to the left of the printer name.

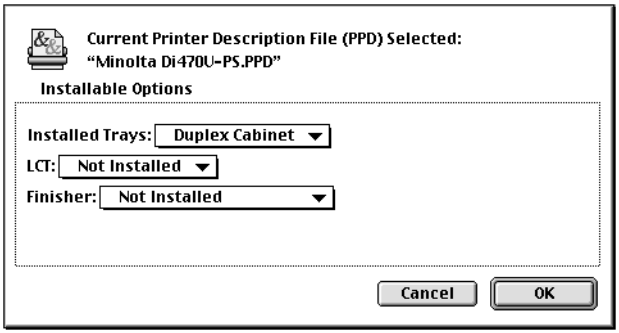


15 Click the **Setup...** button.

16 Click the **Configure** button.



17 Set the operating environment of the controller and click the **OK** button.



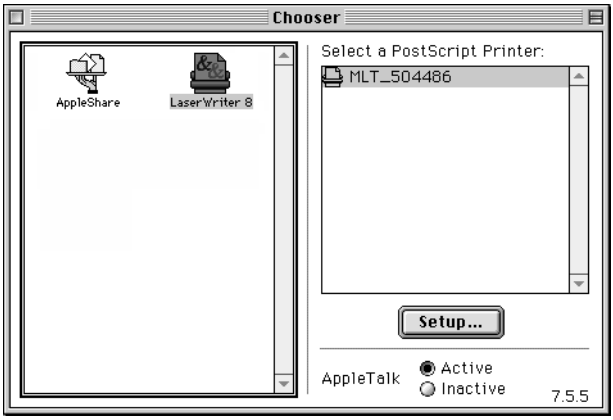
...

Tip

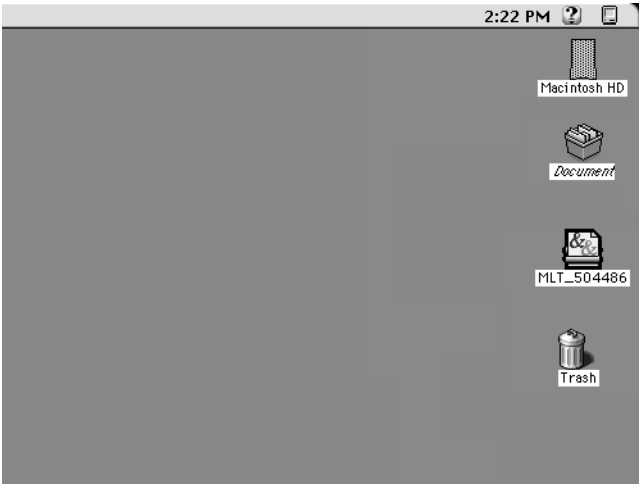
For details of the screen components, see "Print options" on page 6-14.

18 Click the **OK** button.

19 The Chooser dialog box will reappear. Close the Chooser dialog box.



20 A printer icon will appear on the desktop.



Installation (Mac OS X)

This section explains the installation procedure for the Macintosh printer driver for Mac OS X.

Note

This printer driver is compatible with Mac OS X version 10.2 or later.

1 Turn on the machine.

2 Turn on the computer and start up the Mac OS.

- When starting up Mac OS, log in with administrator privileges.

3 Install the printer controller CD-ROM in the CD-ROM drive of your computer.

4 Copy **Minolta Di470U-PS.ppd**, **Minolta Di470E-PS.ppd** and **MinoltaPPDPlugin.dmg** to the desktop from the PPD folder on the CD-ROM.

5 Double-click **MinoltaPPDPlugin.dmg**, which was copied to the desktop.

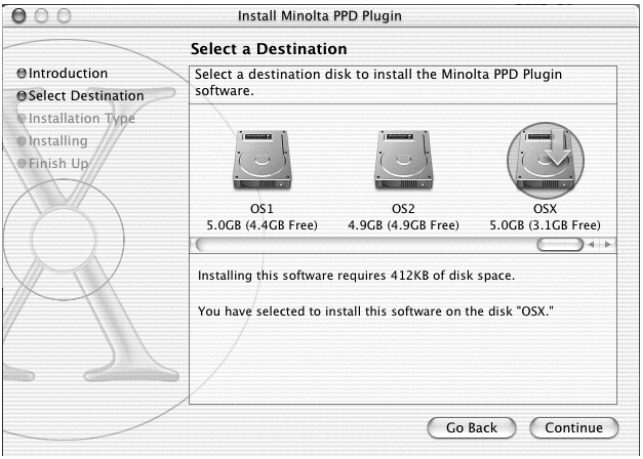
6 Double-click **MinoltaPPDPlugin.pkg** to start it.

The Pi4700 PPD Plugin installer starts up.

7 Click the **Continue** button.

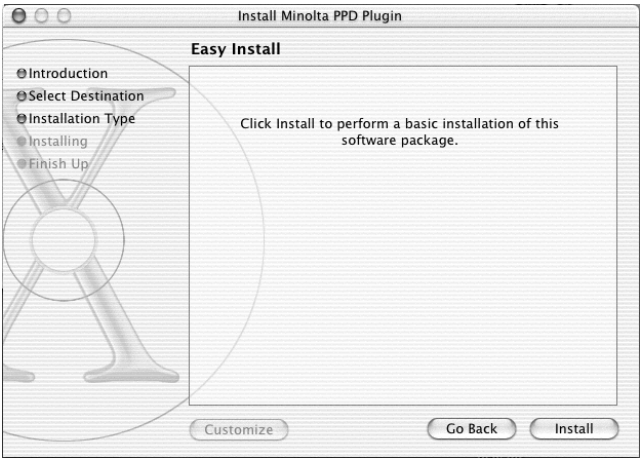
8 Select the partition where the software will be installed, and then click the **Continue** button.

As an example, the dialog box below shows the installation on the OSX disk.



9 Click the **Install** button.

The plugin for Di470PPD is installed.



10 Click the **Close** button.

This completes the installation of the PPD plugin. Next, install the printer driver.

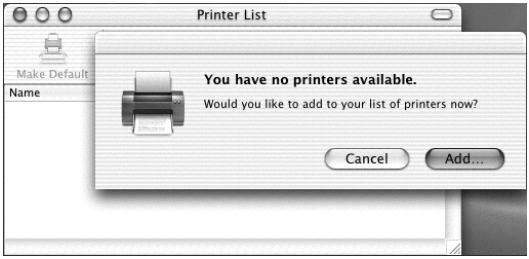
11 Double-click the **MacOSX** icon on the desktop.

12 Click the **Application** icon.

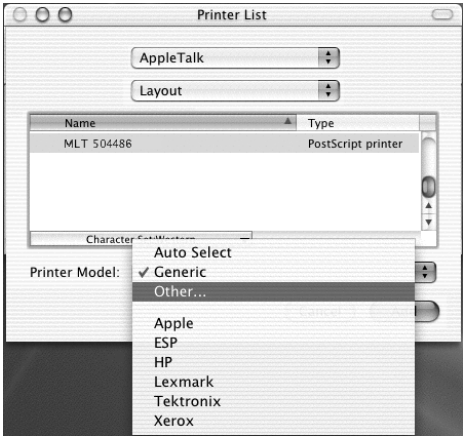
13 Double-click the **Utility** folder.

14 Double-click the **PrintCenter** icon.

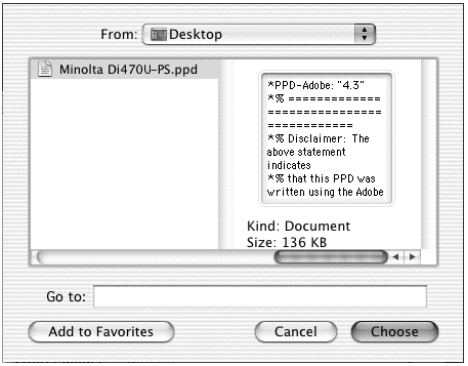
15 Click the **Add...** button.



16 Select **Other...** beside **Printer Model:**.

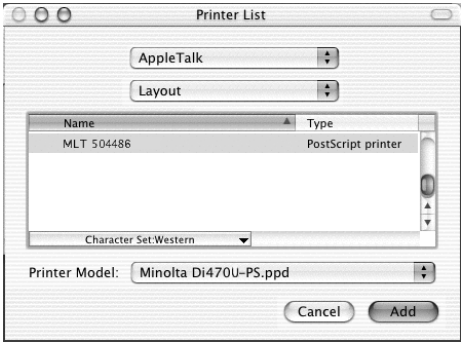


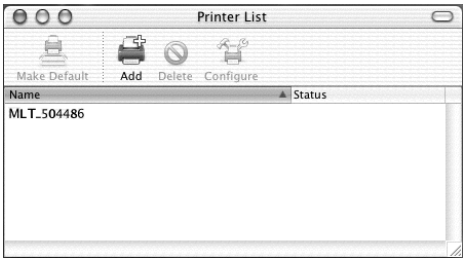
17 Select either Minolta Di470U-PS.ppd (for measurements in inches) or Minolta Di470E-PS.ppd (for metric measurements), which were copied to the desktop in step 4, and then click the **Choose** button.



18 Select the appropriate printer model, and then click the **Add** button.

The printer driver is installed.

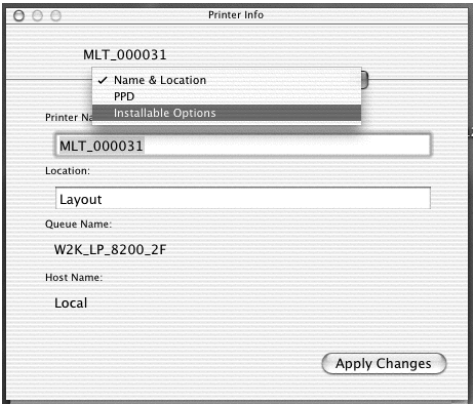




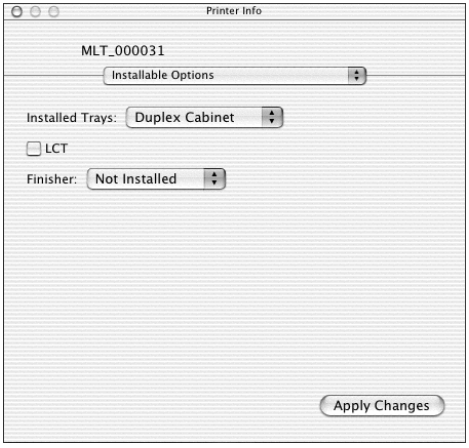
19 From the **Printers** menu, click **Show Info**.

The Printer Info property dialog box appears.

20 Select **Installable Options**.



21 Enter the printer settings, and then click the **Apply Changes** button.



...

Note

For details on the screen components, see "Print options" on page 6-14.

22 Close the Print Center dialog box.

6.2 Print options

This section describes the print settings available in the application's Print dialog box (displayed by clicking **Print** in the **File** menu).

Print options (Macintosh OS 7/8/9)

Each print option allows you to make specific settings as detailed below. For a detailed description of each function, see the corresponding reference page.

Print Option	Available Settings	Reference Page
Installable Options	Allows you to make settings for options installed on the machine.	p. 6-15
Page Attributes	Allows you to make the basic settings for printing.	p. 6-16
PostScript Options	Allows you to make visual-effect and font-related settings.	p. 6-17
General	Allows you to set the pages and the number of copies for printing.	p. 6-18
Background Printing	Allows you to make settings for background printing.	p. 6-19
Cover Page	Allows you to print out a page of descriptive data about each print job.	p. 6-20
Color Matching	Allows you to set color data output.	p. 6-21
Layout	Allows you to set the printing layout.	p. 6-22
Error Handling	Allows you to set the handling of error information.	p. 6-23
Save as File	Allows you to make settings for saving data in files.	p. 6-24
Printer Specific Options	Allows you to make not only such basic settings, such as paper source and exit port, but also enhanced functions, including duplex printing, OHP interleaving, and Cover mode. It further allows you to set finishing capabilities, including sort, staple, punch, and folding, for those occasions when you need to make multiple complete sets of the original document.	p. 6-25

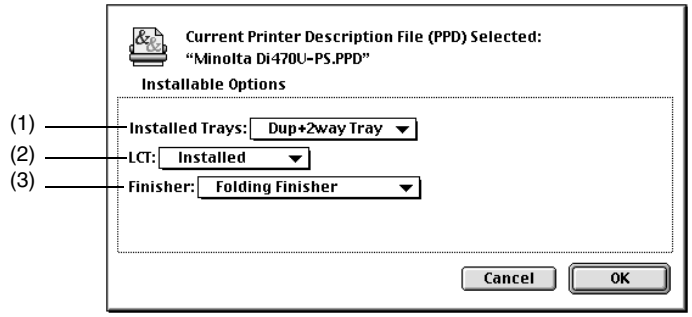
...

Note

The dialog box samples given throughout the subsequent pages are taken from LaserWriter version 8.5.1. The dialog boxes may vary in appearance, showing different functions depending on the particular version of the LaserWriter you are using. See the documentation provided for LaserWriter.

Installable Options

The Installable Options dialog box allows you to set the options installed on the machine. Make sure that the correct settings are made; otherwise, some printer functions may not function properly or printing cannot be performed correctly. The settings should match the machine configuration.



(1) **Installed Trays**
Set the tray configuration of the machine.
Setting values: Dup+2way Tray, Dup+LCC, Duplex Cabinet

(2) **LCT**
Set whether the Large Capacity Cassette is installed or not.
Setting values: Not Installed, Installed

(3) **Finisher**
Set the specifications of the finishing option installed on the machine.
Setting values: Not Installed, Mailbin Finisher, Folding Finisher, Multi-staple Finisher, Single-staple Finisher

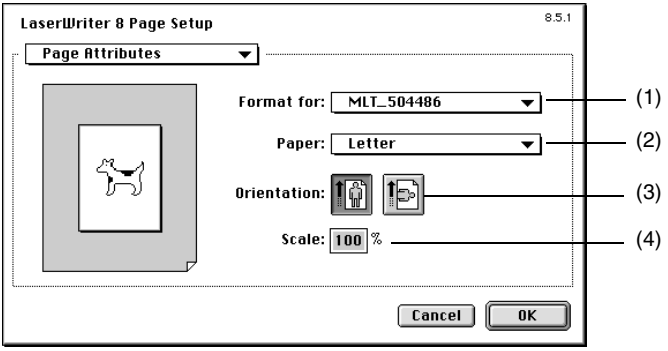
...

Note

*If **Installed Trays** has not been properly set, it may be impossible to select **Finisher** properly.*

Page Attributes

The **Page Attributes** property sheet allows you to make the basic settings for printing.



(1) **Format for**
Specify the name that represents Pi4700e set up with the NIC.

(2) **Paper**
Select the size of the paper to be used for printing.

Setting values	Ledger, 11×14, Legal, Letter, Executive, Invoice, A3, A4, A5, A6, JIS B4, JIS B5, JIS B6, FLS1, FLS2, FLS3, FLS4

(3) **Orientation**
Select the orientation of the image with the corresponding icon.

Setting values	Portrait, Landscape

(4) **Scale**
Specify the image size of the print.

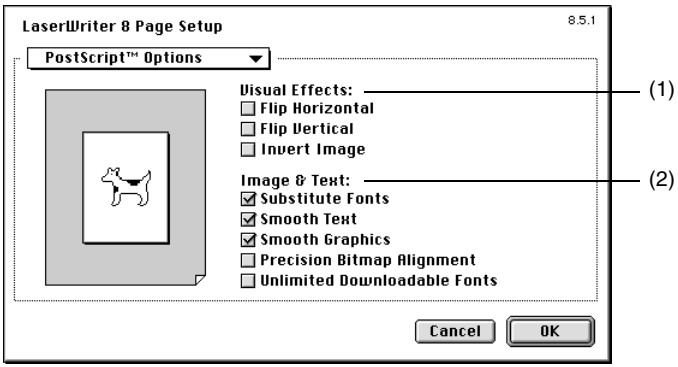
Setting range	25 to 400%

Note

If you select a size of paper not loaded in the machine or Manual Feed, the machine will give a message prompting you to add paper to Tray1, Tray2, or the manual bypass port and enter into a standby state.

PostScript Options

The **PostScript Options** property sheet allows you to make visual-effect and font-related settings.



(1) **Visual Effects**
Allows you to turn over the image or apply other visual effects.

- Flip Horizontal — Prints the image as if the original were viewed in a mirror.
- Flip Vertical — Prints the image upside down from the original.
- Invert Image — Reverses tonal arrangements of the original, producing a negative image.

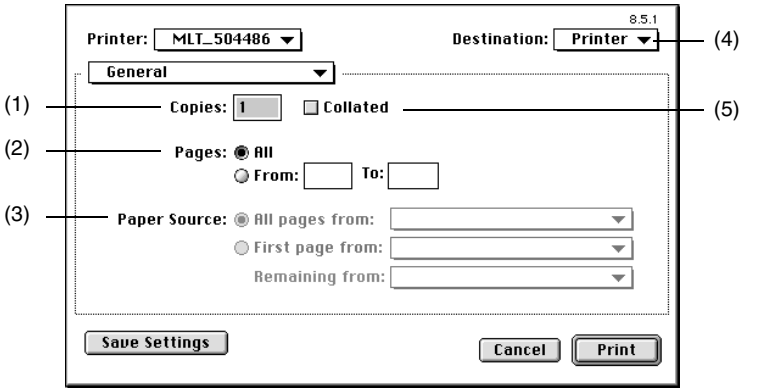
(2) **Image & Text**
Allows you to set the output quality of text and graphics and make font-related settings.

- Substitute Fonts — Sets font substitution if a printer font is similar to or under the same name as the screen font. It is enabled at installation.
- Smooth Text — Smooths bitmapped fonts. It is enabled at installation.
- Smooth Graphics — Smooths the graphic image. It is enabled at installation.
- Precision Bitmap Alignment — Adjusts bitmapped images to the printer resolution.
- Unlimited Downloadable Fonts — Enables downloading of as many fonts as required.

Tip
The functions of LaserWriter itself are being used. See the documentation provided for LaserWriter.

General

The **General** property sheet allows you to set the pages and the number of copies for printing.



(1) **Copies**
Set the number of copies to be made.

Setting range	1 to 999 sets

(2) **Pages**
Specify the pages to be printed.

All	Prints all pages.
From: to:	Prints pages between the specified pages.

(3) **Paper Source**
This cannot be set on this property sheet. Use Printer Specific Options.

(4) **Destination**
Select whether to print to the machine or a file.

Setting values	Printer, File

(5) **Collated**
Do not make a setting on this property sheet. Use Printer Specific Options.

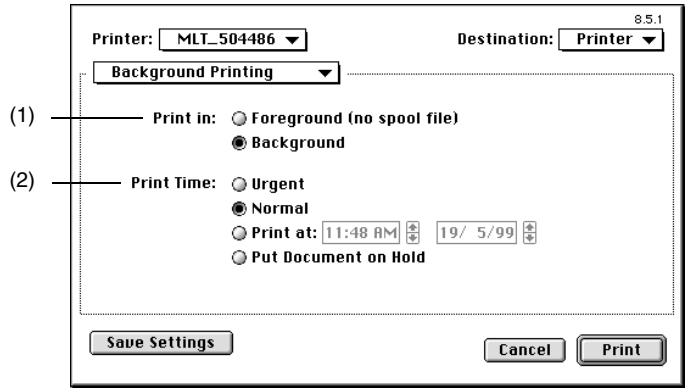
Note

It is possible to enter a number exceeding setting range: However, do not specify the number exceeding the range.

When using the OHP interleaving function, set the number of sets of prints to "1".

Background Printing

The **Background Printing** property sheet allows you to make settings for background printing.



(1) **Print in**
Specify whether to enable background printing or not.

- Foreground (no spool file) — Does not allow the user to use the application while the document is printing.
- Background — Allows the user to use the computer even while a document is printing.

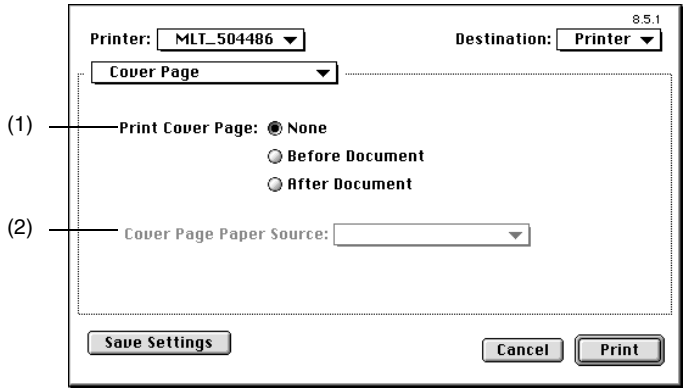
(2) **Print Time**
Set the conditions for background printing.

- Urgent — Prints a job ahead of any others.
- Normal — Sets for printing at the end of the print queue.
- Print at — Sets the date and time-of-day for printing.
- Put Document on Hold — Places a job in the print queue without printing.

Tip
The functions of LaserWriter itself are being used. See the documentation provided for LaserWriter.

Cover Page

The **Cover Page** property sheet allows you to print out a page of descriptive data about each print job. This function differs from Front Cover Page in Printer Specific Options.



(1) **Print Cover Page**
Select whether to add the Cover Page or not, or how the Cover Page is to be added.

None	Does not add a Cover Page.
Before Document	Adds the Cover Page at the beginning of the document.
After Document	Adds the Cover Page at the end of the document.

(2) **Cover Page Paper Source**
Unavailable. The same paper source as that selected for “Paper Source” in “Printer Specific Options” is used.

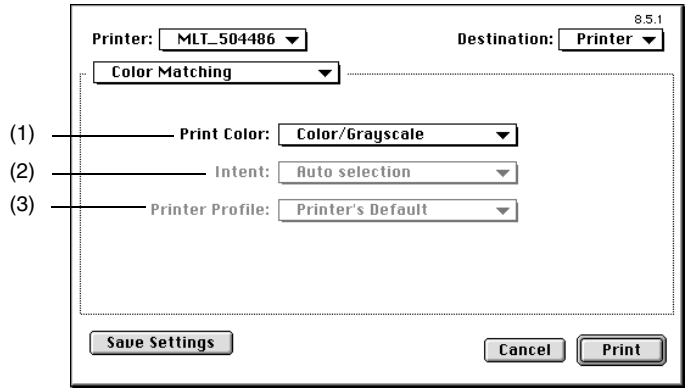
...

Tip

The functions of LaserWriter itself are being used. See the documentation provided for LaserWriter.

Color Matching

The **Color Matching** property sheet allows you to make settings for color data output.



(1) **Print Color**
Select gray scale or monochrome.

- Color/Grayscale — Prints with gray scale.
- Grayscale — This function is not supported.
- Black and White — Prints in monochrome.
- ColorSync Color Matching — Prints with color reproduction data.
- PostScript Color Matching — Prints with printer color characteristics.

(2) **Intent**
Sets matching style.

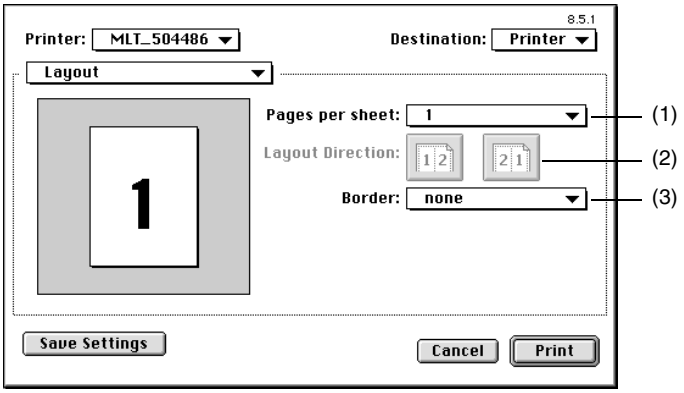
Setting Values — Auto selection, Perceptual matching, Relative colorimetric, Saturation, Absolute colorimetric

(3) **Printer Profile**
Selects profile.

Tip
The functions of LaserWriter itself are being used. See the documentation provided for LaserWriter.

Layout

The **Layout** property sheet allows you to set the printing layout.



(1) **Pages per sheet**
Specify the number of pages assigned to a single sheet of paper.

Setting values	1, 2, 4, 6, 9, 16, 4 (Down Before Across), 6 (Down Before Across), 9 (Down Before Across), 16 (Down Before Across)

(2) **Layout Direction**
Specify the layout direction by clicking the appropriate icon.

(3) **Border**
Specify the type of border line.

Setting values	None, Single hair line, Single thin line, Double hair line, Double thin line

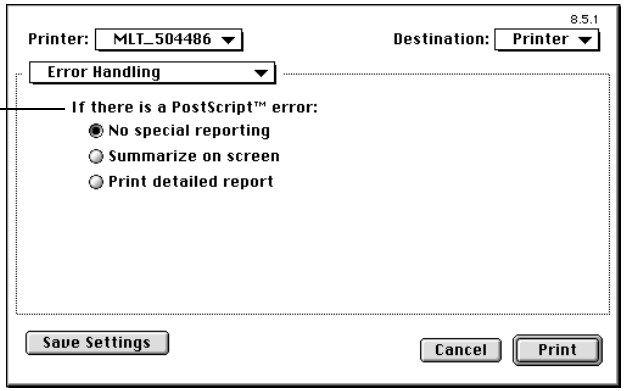
Tip

The layout direction can be checked on the paper illustration on the left.

The functions of LaserWriter itself are being used.

Error Handling

The **Error Handling** property sheet allows you to make settings for handling error information.



(1) **If there is a PostScript error**
Set the method for handling error information.

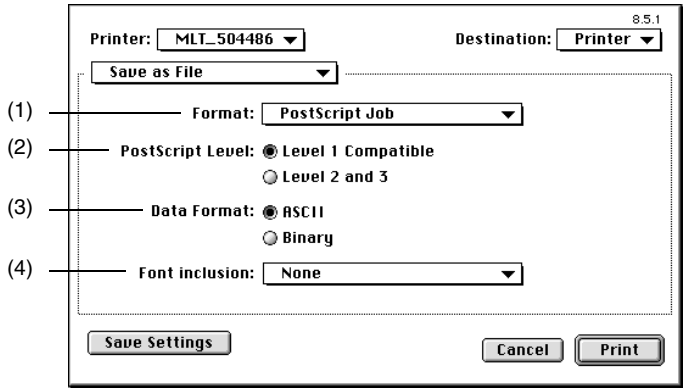
- No special reporting — Does not display Error information.
- Summarize on screen — Displays Error information on the screen.
- Print detailed report — Prints Error information.

Tip

The functions of LaserWriter itself are being used. See the documentation provided for LaserWriter.

Save as File

The **Save as File** dialog box allows you to choose settings for file format when you save data as a file, but without printing.



(1) **Format**
Specify the file format.

Setting Values	PostScript Job, EPS Mac Standard preview, EPS Mac Enhanced preview, EPS No Preview, Acrobat PDF

(2) **PostScript Level**
Specify the version of PostScript.

Setting values	Level 1 Compatible, Level 2 and 3

(3) **Data Format**
Specify the data format.

• ASCII	Saves as a text file.
• Binary	Saves as a binary file.

(4) **Font inclusion**
Set the font to be saved in the file.

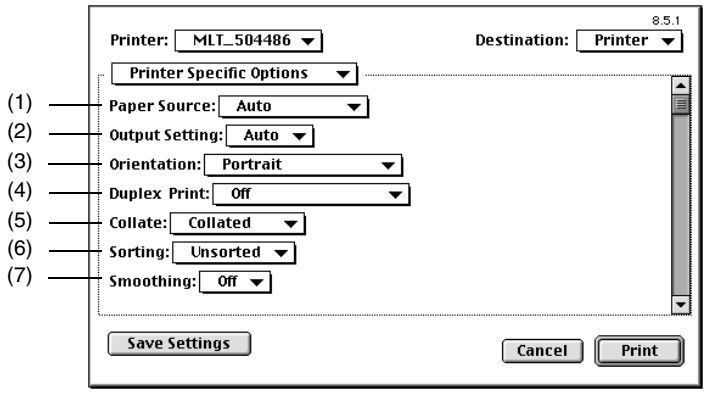
Setting Values	None, All, All But Standard 13, All But Fonts in PPD file

Tip

The functions of LaserWriter itself are being used. See the documentation provided for LaserWriter.

Printer Specific Options

The Printer **Specific Options** property sheet allows you to make not only such basic settings as the paper source and exit port, but also enhanced functions including duplex printing, OHP interleaving, and Front Cover. It also allows you to specify Sort, Staple, Punch, Folding, and other finishing functions.



Note

With LaserWriter 8.5.1, used for this explanation, all items in Printer Specific Options can be displayed as one page by scrolling. With some other LaserWriter versions, contents in Printer Specific Options are divided into two pages as Printer Specific Options 1 and Printer Specific Options 2. Contents of function for each item are the same, however.

(1) **Paper Source**
Select the paper source to be used by the machine.
Available options depend on the type of paper source available on the machine.

- Auto — Automatically selects the paper source in which paper of the size specified by Paper Size is loaded.
- Tray1 to Tray4, LCC, LCT — Prints on paper loaded in the specified paper source.
- Manual Feed — Prints on paper loaded in the Multi Manual Feed Tray.

(2) **Output Setting**
Select the machine exit tray into which the prints are to be fed.
Available options are limited by the type of finishing option configured with the machine.

- Mailbin Finisher — Auto, bin1 to bin5
- Except Mailbin Finisher — Auto

(3) **Orientation**
Select the orientation of the image on the paper.

• Portrait	Prints the document across the narrower dimension of the paper.
• Landscape	Prints the document across the wider dimension of the paper.
• Rotated Landscape	Outputs landscape orientation upside down.

(4) **Duplex Print** <only when the Dup + 2way Tray, Dup + LCC or Duplex Cabinet is mounted>
Select the desired duplex print function. The results of the specified duplex print can be viewed on the paper preview.

• Off	Does not perform duplex printing.
• Short Edge Binding	Prints on both sides of each page so that the printed pages can be bound along the short edge.
• Long Edge Binding	Prints on both sides of each page so that the printed pages can be bound along the long edge.

(5) **Collate**
Select whether printed pages are to be sorted into copy sets when printing more than one copy of the same document.

Collated	Pages into copy sets. For instance, when printing 5 sets of a document consisting of 10 pages, printed pages are sorted by copy (i.e., 5 sets of a 10-page document are output).
Uncollated	Prints the specified number of pages one page at a time. For instance, when printing 5 sets of a document, pages are printed five times, one page at a time.

(6) **Sorting**
Select the sorting method:

• Unsorted	Prints are not sorted.
• Sorted	Prints are sorted.

(7) **Smoothing**
Correct the edges of the printed image.

Setting values	Off, On

Note for (1)
It is possible that an option cannot be selected because of the paper size. For details, see the User Manual of the machine.

Tip for (1)
*The paper source is set with **Installable Options**.*

The paper source options to be selected are limited depending on the function or functions to be used (e.g., OHP Interleaving, Front Cover, etc.).

Note for (2)

It is possible that an option cannot be selected because of the paper size. For details, see the User Manual of the machine.

Tip for (2)

*The finishing option is set with **Installable Options**.*

Note for (3)

Staple and Punch positions will not be correct if this function is selected improperly.

Tip for (3)

Rotated Landscape is handy for positioning Punch or Staple on the opposite side.

Tip for (4)

The paper sizes that enable Duplex Print are Ledger, 11 × 14, Legal, Letter, Executive, Invoice, A3, A4, A5, JIS B4, JIS B5, FLS1, FLS2, FLS3, and FLS4.

Note for (5)

*Always set **Collated** in General screen to **OFF**.*

Note for (6)

*When sorting is used, set **Collate** item to **Uncollated**.*

Tip for (6)

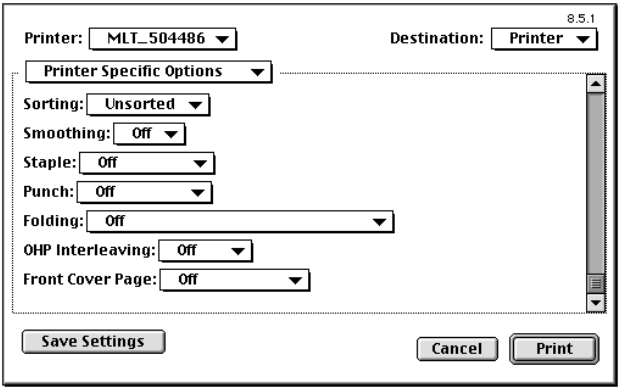
*If **Elevator Tray** is selected when the machine is equipped with a Multi-staple Finisher, Single-staple Finisher or Mailbin Finisher, sets or stacks will be stacked in a sawtooth manner so that each is easy to identify.*

If Folding Finisher is mounted, or if none of the finishing options is mounted, sets or stacks will be stacked in a crisscross manner.

Following are the minimum requirements for enabling crisscross sorting:

Stacks of paper of the same size, loaded in both lengthwise and crosswise direction.

Staple, Punch or Front Cover Page is not set.



(8) **Staple** <only when Multi-staple Finisher, Single-staple Finisher, Mailbin Finisher or Folding finisher is mounted>
Select whether to staple each copy set of the document.

- Off — Does not staple the printed pages.
- Corner — Staples together each copy set at its corner.
- Short Edge — <only when Multi-staple Finisher or Folding Finisher is mounted> Stapled along the short edge of the document.
- Long Edge — <only when Multi-staple Finisher or Folding Finisher is mounted> Stapled along the long edge of the document.
- Center — <only when Folding Finisher is mounted> Stapled at the center of the document.

(9) **Punch** <only when Multi-staple Finisher, Mailbin Finisher or Folding Finisher is mounted>
Select whether to punch holes in the printed pages.

- Off — Does not punch holes.
- Short Edge — Punches holes along the short edge of the document.
- Long Edge — Punches holes along the long edge of the document.

(10) **Folding** <only when Folding Finisher is mounted>
Set the folding functions for finishing.

- Off — Does not fold the printed page.
- Crease — Makes a crease in the printed page.
- Crease + Staple — Staples the printed page at the center with a crease made in it.
- Half Folding — Folds the printed page in two.

- Half Folding + Staple — Folds printed pages in two and staples them together.
- Half Folding + Punch — Folds printed pages in two and punches holes in them.
- Half Folding + Staple, Punch — Folds printed pages in two, staples them together, and punches holes in them.
- Z-folding — Folds printed pages into three parts.
- Z-folding + Corner Staple — Folds printed pages into three parts and staples them at the corner.
- Z-folding + Long Edge Staple — Folds printed pages into three parts and staples them together.
- Z-folding + Punch — Folds printed pages into three parts and punches holes in them.
- Z-folding + Corner Staple, Punch — Folds printed pages into three parts, staples them at the corner, and punches holes in them.
- Z-folding + Long Edge Staple, Punch — Folds printed pages into three parts, staples them together, and punches holes in them.

(11) **OHP Interleaving**
Select whether to insert a sheet of paper between sheets of OHP transparencies on which prints have been made.

- Off — Does not perform OHP Interleaving.
- Tray1 to Tray4, LCC, LCT — Specify the paper source for the interleaves.

(12) **Front Cover Page**
Lets you use paper for the cover of a different type (such as colored paper) from that for the text pages of your copy sets.

- Off — Feeds paper for all pages of your copy sets from the paper source specified in Paper Source.
- Manual Feed, Tray1 to Tray4, LCC, LCT — Specify the paper source for the cover.

...

Note for (8)

*If the Folding function is to be used, turn Off **Staple** and make the Staple setting under **Folding**.*

*If **Staple** is set, printed pages are fed out into the Elevator Tray.*

The stapling position may be at the upper left or upper right corner depending on the orientation of the paper and printing.

If the number of sheets of paper exceeds the limit that the Multi-staple Finisher, Single-staple Finisher or Mailbin Finisher can handle, the stapling function may be canceled. For details, see the machine User Manual.

If the original document for a print job contains a page of a different size from the others and this document is printed, the Staple setting may be canceled.

If the original document for a print job contains a page with a different orientation from the others, care should be used because the stapling position is determined according to the direction of the first page.

It is possible that an option cannot be selected because of the paper size. For details, see the User Manual of the machine.

Note for (9)

*If the Folding function is to be used, turn Off **Punch** and make the Punch setting under **Folding**.*

It is possible that an option cannot be selected because of the paper size. Some paper sizes do not allow you to select the hole position. For details, see the User Manual of the machine.

Holes may not be punched if Long Edge is selected with manual feed copying.

The Multi-staple Finisher for the inch areas offers three punch holes.

Note for (10)

*If Staple or Punch is to be used with Folding, be sure to turn Off **Staple** or **Punch**.*

Note for (11)

*Set **1** in **Copies** when using OHP Interleaving.*

*Use **Paper Source** to specify OHP transparencies. The paper source that can be selected is Manual Feed.*

*The same paper source cannot be selected for **OHP Interleaving** and **Paper Source**.*

Tip for (11)

The interleaves are blank pages.

Note for (12)

This function differs from LaserWriter standard Cover Page function (p. 6-20).

*Use **Paper Source** to specify OHP transparencies: The paper source can be selected from Manual Feed, Tray1 to Tray4, LCC and LCT.*

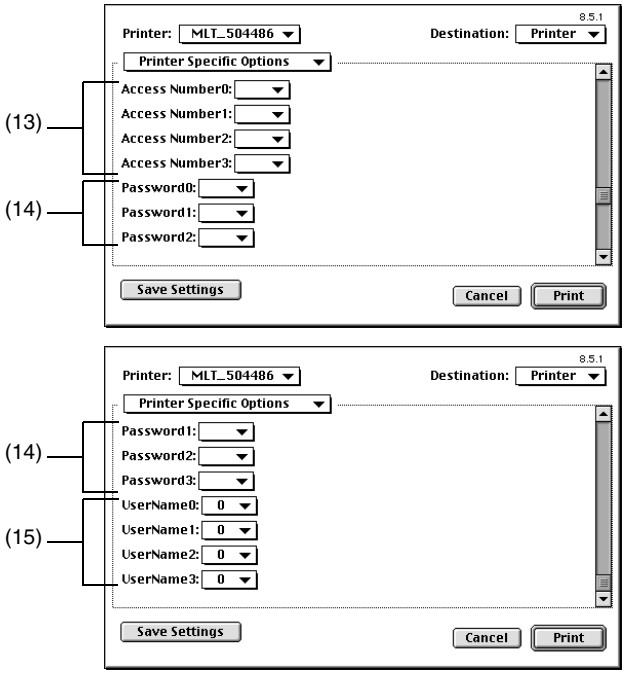
If thick paper or other special paper is selected, the machine may not feed prints out into the selected exit tray.

...

Tip for (12)

The covers have data printed on them.

No back covers are available.



(13) **Access Number**
If the copy track function is to be used, enter a four-digit access number. An access number is attached to each printing job, enabling you to carry out management at the machine. In order to use this function, copy track function must be set at the machine. When the copy track function is set at the machine, printing may sometimes fail to take place until the access number designated at the machine is correctly set.
Enter the access number set in the machine.
Setting range: 0 to 9 for each box

(14) **Password**
If Lock Job is to be used, enter a four-digit lock job password. Entering 0 for all four digits indicates that there is no password.
A locked printing job will be printed when it is unlocked using the Job List display on the panel of the machine. In this case, a password is necessary.
Enter the password of the lock job.
Setting range: 0 to 9 for each box

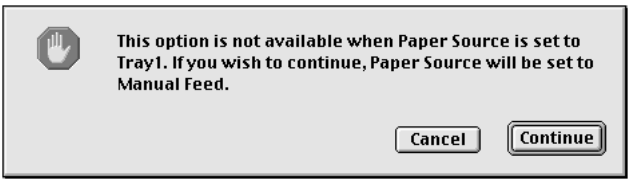
(15) **User Name**
The user name set in the printer driver is displayed as the job user name on the machine's touch panel.
Setting range: 4 numbers max

Note
If nothing is entered, the setting is turned off.

Conflicts dialog box

A message as shown below will appear when functions that are incompatible with each other are specified.

It appears when you have made a wrong selection.



The message gives the detail of the functions that are incompatible with each other. Check the detail and click **Continue** or **Cancel** to exit the message.

Print options (Mac OS X)

Each print option allows you to make specific settings as detailed below. For a detailed description of each function, see the corresponding reference page.

Print Option	Available Settings	Reference Page
Copies & Pages	Allows you to set the pages and the number of copies for printing.	—
Layout	Allows you to set the printing layout.	—
Error Handling	Allows you to set the handling of error information.	—
Paper & Quality Settings	Allows your to make the basic settings for printing.	p. 6-34
Paper Source Settings	Allows you to set the paper source.	p. 6-35
Job Management	Allows you to print out a page of descriptive data about each print job.	p. 6-36
Finishing Settings	Allows you to set finishing capabilities, including sort, staple, punch, and folding, for those occasions when you need to make multiple complete sets of the original document.	p. 6-37
Summary	Displays a list of the current print settings.	p. 6-39

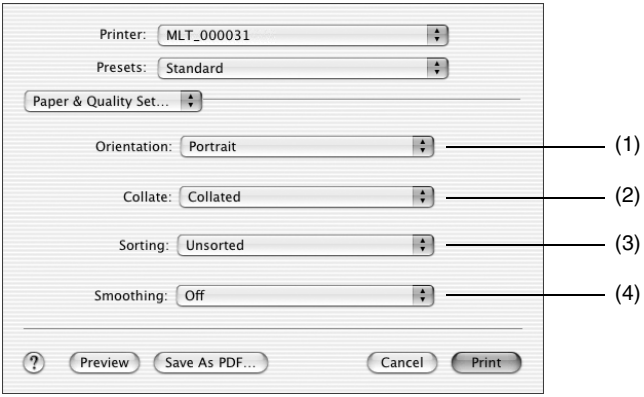
Note

The Copies & Pages, Layout, Output Options and Error Handling settings are supported by Print Center. Refer to the document corresponding to the operating system being used.

No conflict warnings will appear, indicating that incompatible functions are specified.

Paper & Quality Settings

The **Paper & Quality Settings** property sheet allows your to make the basic settings for printing.



(1) **Orientation**
Select the orientation of the image.

Setting values	Portrait, Landscape

(2) **Collate**
Select whether printed pages are to be sorted into copy sets when printing more than one copy of the same document.

Collated	Pages into copy sets. For instance, when printing 5 sets of a document consisting of 10 pages, printed pages are sorted by copy (i.e., 5 sets of a 10-page document are output).
Uncollated	Prints the specified number of pages one page at a time. For instance, when printing 5 sets of a document, pages are printed five times, one page at a time.

(3) **Sorting**
Select the sorting method:

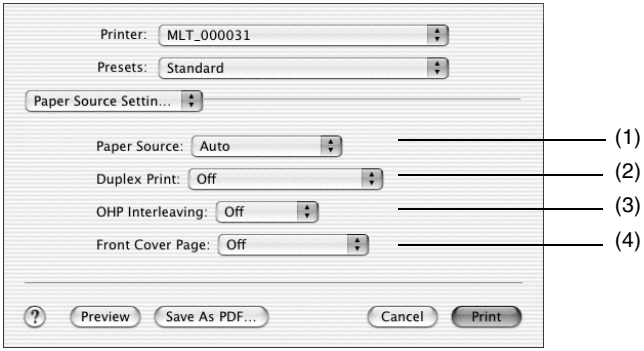
• Unsorted	Prints are not sorted.
• Sorted	Prints are sorted.

(4) **Smoothing**
Correct the edges of the printed image.

Setting values	Off, On

Paper Source Settings

The **Paper Source Settings** property sheet set the paper source.



(1) **Paper Source**
Select the paper source to be used by the machine.
Available options depend on the type of paper source available on the machine.

- Auto — Automatically selects the paper source in which paper of the size specified by Paper Size is loaded.
- Tray1 to Tray4, LCC, LCT — Prints on paper loaded in the specified paper source.
- Manual Feed — Prints on paper loaded in the Multi Manual Feed Tray.

(2) **Duplex Print** <only when the Dup + 2way Tray, Dup + LCC or Duplex Cabinet is mounted>
Select the desired duplex print function. The results of the specified duplex print can be viewed on the paper preview.

- Off — Does not perform duplex printing.
- Short Edge Binding — Prints on both sides of each page so that the printed pages can be bound along the short edge.
- Long Edge Binding — Prints on both sides of each page so that the printed pages can be bound along the long edge.

(3) **OHP Interleaving**
Select whether to insert a sheet of paper between sheets of OHP transparencies on which prints have been made.

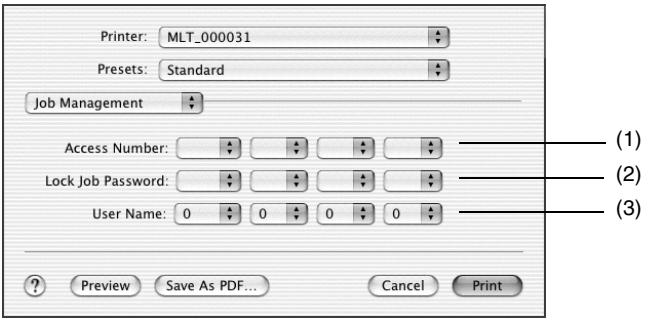
- Off — Does not perform OHP Interleaving.
- Tray1 to Tray4, LCC, LCT — Specify the paper source for the interleaves.

(4) **Front Cover Page**
Lets you use paper for the cover of a different type (such as colored paper) from that for the text pages of your copy sets.

- Off — Feeds paper for all pages of your copy sets from the paper source specified in Paper Source.
- Manual Feed, Tray1 to Tray4, LCC, LCT — Specify the paper source for the cover.

Job Management

The **Job Management** property sheet allows you to print out a page of descriptive data about each print job.



(1) **Access Number**
If the copy track function is to be used, enter a four-digit access number. An access number is attached to each printing job, enabling you to carry out management at the machine. In order to use this function, copy track function must be set at the machine. When the copy track function is set at the machine, printing may sometimes fail to take place until the access number designated at the machine is correctly set.
Enter the access number set in the machine.
Setting range: 0 to 9 for each box

(2) **Lock Job Password**
If Lock Job is to be used, enter a four-digit lock job password. Entering **0** for all four digits indicates that there is no password.
A locked printing job will be printed when it is unlocked using the Job List display on the panel of the machine. In this case, a password is necessary.
Enter the password of the lock job.
Setting range: 0 to 9 for each box

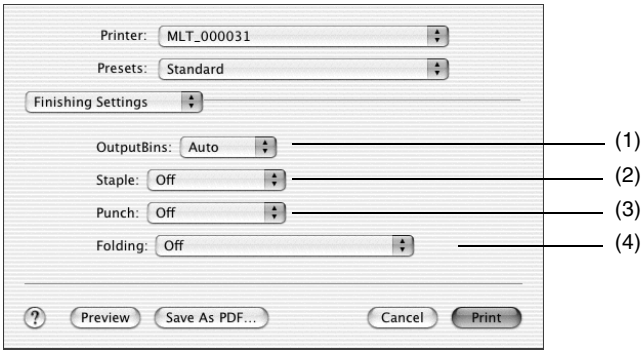
(3) **User Name**
The user name set in the printer driver is displayed as the job user name on the machine's touch panel.
Setting range: 4 numbers max

...

Note
If nothing is entered, the setting is turned off.

Finishing Settings

The **Finishing Settings** property sheet allows you to set finishing capabilities, including sort, staple, punch, and folding, for those occasions when you need to make multiple complete sets of the original document.



(1) **OutputBins** <only when Mailbin Finisher is mounted>
Select the machine exit tray into which the prints are to be fed.
Available options are limited by the type of finishing option configured with the machine.
Setting range: Auto, Bin1 to Bin5

(2) **Staple** <only when Multi-staple Finisher, Single-staple Finisher, Mailbin Finisher or Folding finisher is mounted>
Select whether to staple each copy set of the document.

- Off — Does not staple the printed pages.
- Corner — Staples together each copy set at its corner.
- Short Edge — <only when Multi-staple Finisher or Folding Finisher is mounted> Stapled along the short edge of the document.
- Long Edge — <only when Multi-staple Finisher or Folding Finisher is mounted> Stapled along the long edge of the document.
- Center — <only when Folding Finisher is mounted> Stapled at the center of the document.

(3) **Punch** <only when Multi-staple Finisher, Mailbin Finisher or Folding Finisher is mounted>
Select whether to punch holes in the printed pages.

- Off — Does not punch holes.
- Short Edge — Punches holes along the short edge of the document.
- Long Edge — Punches holes along the long edge of the document.

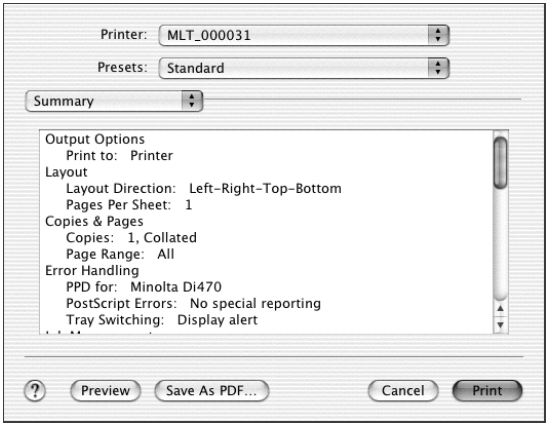
(4) **Folding** <only when Folding Finisher is mounted>
Set the folding functions for finishing.

- Off — Does not fold the printed page.
- Crease — Makes a crease in the printed page.

• Crease + Staple	Staples the printed page at the center with a crease made in it.
• Half Folding	Folds the printed page in two.
• Half Folding + Staple	Folds printed pages in two and staples them together.
• Half Folding + Punch	Folds printed pages in two and punches holes in them.
• Half Folding + Staple, Punch	Folds printed pages in two, staples them together, and punches holes in them.
• Z-folding	Folds printed pages into three parts.
• Z-folding + Corner Staple	Folds printed pages into three parts and staples them at the corner.
• Z-folding + Long Edge Staple	Folds printed pages into three parts and staples them together.
• Z-folding + Punch	Folds printed pages into three parts and punches holes in them.
• Z-folding + Corner Staple, Punch	Folds printed pages into three parts, staples them at the corner, and punches holes in them.
• Z-folding + Long Edge Staple, Punch	Folds printed pages into three parts, staples them together, and punches holes in them.

Summary

Displays a list of the current print settings.



7 Convenient Functions

7.1 Introduction

In this chapter, you will learn how to print your document, guiding you through steps from start to end of printing.

WordPad, a Windows 98 standard application, is used as an example to show the steps to follow for using Windows 98 PCL6 version driver.

Though the screen format differs from one driver to another, the given procedure may be used as reference for a driver other than the Windows 98 PCL6.

If a different procedure is applicable to a specific driver, that is included with the text.

Tips

Different procedures apply to start a property sheet depending on the application. This chapter is concerned only with the procedure to be used with WordPad.

A single application may offer two or more different procedures to follow to open a property sheet. If, for example, WordPad is used on Windows 98 PCL6 driver, the text that follows will instruct you to open a property sheet by opening the Print dialog box with **Print** *in the* **File** *menu. Another procedure that may be used is: Open the Page Setup dialog box with* **Page Setup** *in the* **File** *menu, and then click the* **Printer** *button to open the Page Setup dialog box before opening a property sheet.*

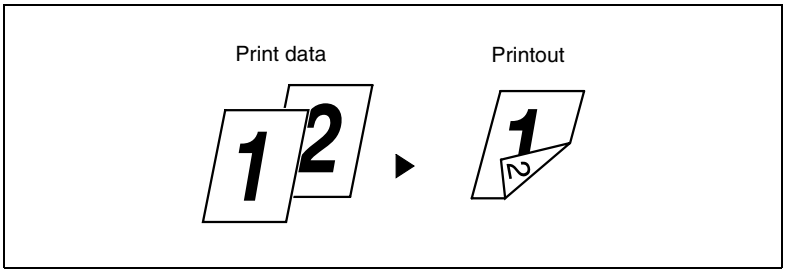
To open the dialog box with Windows 2000, select **Print...** from **File** menu, and select **Minolta Di470 PCL6** from **Printer selection** in **General**.

7.2 Printing on both sides of the paper

Overview

This section explains how to print a multi-page document which has been created with an application using both sides of a sheet. It also shows the steps to be followed when stapling the two-sided pages.

To use this function, a Dup + 2way Tray, Dup + LCC or Duplex Cabinet must be mounted on the machine.



Procedure

1 Start printing from the application which has been used to create the document: Normally, printing can be started by selecting **Print** from the **File** menu.

2 The Print dialog box will appear.
Make sure that **Minolta Di470 PCL6** is displayed for **Name** in **Printer**, and click the **Properties** button.

...

Note
Some applications allow you to set Copies and Collate (Sort) in the Print dialog box. To ensure proper printing operation, however, turn OFF these items of the application, and make the necessary settings in each property sheet of the printer driver.

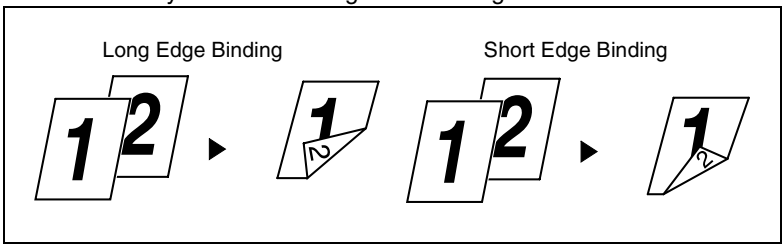
3 The Minolta Di470 PCL6 Properties dialog box will appear.

4 Make sure that the size of the document created with the application is displayed in **Original Document Size** on the **Paper** tab.

5 Click the **Setup** tab.

6 Select **Long Edge Binding** or **Short Edge Binding** from **Duplex/Booklet**.

If Long Edge Binding is selected, printing will be performed on both sides of each page so that the printed pages form a book when they are bound along the long edge. If **Short Edge Binding** is selected, printing will be performed on both sides of each page so that the printed pages form a book when they are bound along the short edge.



...

Tip

The Duplex/Booklet icon shows which edge is to be bound.

7 If you want to staple the printed pages, click **Detail Of Output Setting** to open the dialog box and select **Corner Staple** in **Staple**. Then, click the **OK** button.

...

Note

When Long Edge Binding is selected, Short Edge cannot be selected for punch hole.

When Short Edge Binding is selected, Long Edge cannot be selected for punch hole.

...

Tip

*To make holes in the printed pages, select **Long Edge** or **Short Edge** in **Punch** on **Detail of Output Setting**.*

8 Make other settings as necessary and click the **OK** button.

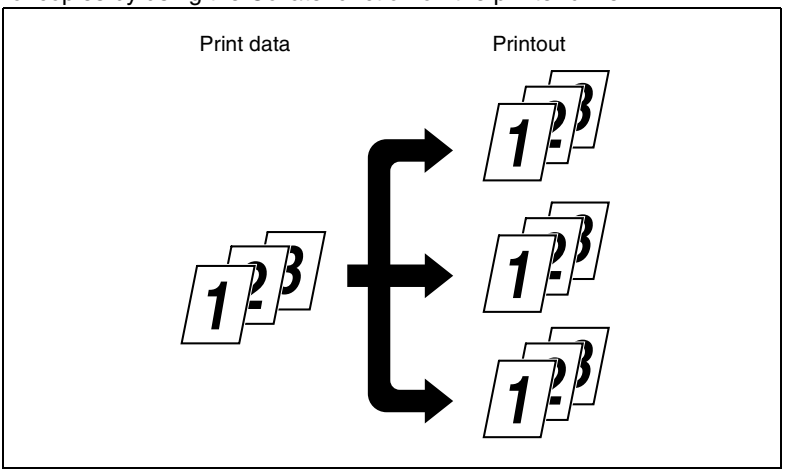
9 The Print dialog box will reappear. Click the **OK** button.

10 The data will then be transferred to the machine and printing will soon start.

7.3 Printing more than one copy at a time

Overview

This section explains how to print two or more copies of a document that has been created with an application. Most applications allow this function to be executed from the Print dialog box. This section explains how to print two or more set copies of documents created with an application. Most applications allow this function to be executed from the Print dialog box. The steps described in the following are use to print two or more collated sets of copies by using the Collate function on the printer driver.



Procedure

1 Start printing from the application which has been used to create the document: Normally, printing can be started by selecting **Print** from the **File** menu.

2 The Print dialog box will appear.
Make sure that **Minolta Di470 PCL6** is displayed for **Name** in **Printer**, and click the **Properties** button.

...

Note

Some applications allow you to set Copies and Collate (Sort) in the Print dialog box. To ensure proper printing operation, however, turn OFF these items of the application, and make the necessary settings in each tab of the printer driver.

3 The Minolta Di470 PCL6 Properties dialog box will appear. If the **Paper** tab is not displayed, click the **Paper** tab.

4 Make sure that the size of the document created with the application is displayed in **Original Document Size**.

5 In **Copies**, set the number of copies to be printed.

6 In **Collate**, select **Collated** so that the printed pages will be sorted into copy sets.

Tip

*When **Uncollated** is selected, printed pages will be sorted into groups of identical pages.*

7 Make other settings as necessary and click the **OK** button.

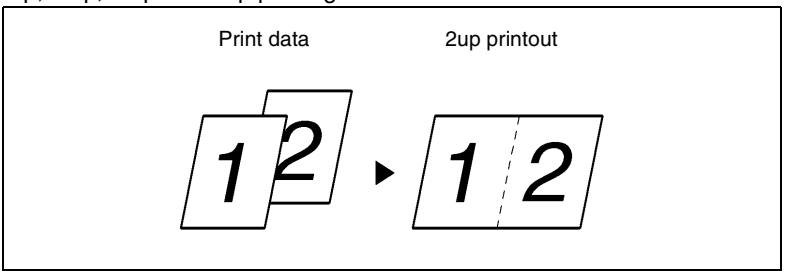
8 The Print dialog box will reappear. Click the **OK** button.

9 The data will then be transferred to the machine and printing will soon start.

7.4 Specifying N-up printing

Overview

This section explains how to print two pages on one side of a sheet of paper (2 up). The same procedure is applicable when you want to perform 4 up, 6 up, 9 up or 16 up printing.



Procedure

1 Start printing from the application which has been used to create the document: Normally, printing can be started by selecting **Print** from the **File** menu.

2 The Print dialog box will appear.
Make sure that **Minolta Di470 PCL6** is displayed for **Name** in **Printer**, and click the **Properties** button.

...

Note

Some applications allow you to set Copies and Collate (Sort) in the Print dialog box. To ensure proper printing operation, however, turn OFF these items of the application, and make the necessary settings in each tab of the printer driver.

3 The Minolta Di470 PCL6 Properties dialog box will appear.

4 Make sure that the size of the document created with the application is displayed in **Original Document Size** on the **Paper** tab.

5 Click the **Setup** tab.

6 Select **2 up** in **N-up**.

7 Click **N-up style** to open the dialog box and set the **Page Location**.

8 Make other settings as necessary and click the **OK** button.

9 The Print dialog box will reappear. Click the **OK** button.

10 The data will then be transferred to the machine and printing will soon start.

...

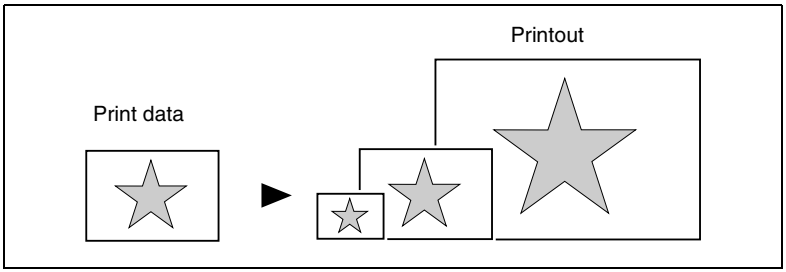
Note

Void image and image overlap may result in printing of a document that contains pages of assorted sizes and directions.

7.5 Printing in reduced/enlarged size

Overview

This section explains how to enlarge or reduce the image on a document created with an application for printing on paper of a designated output size.



Procedure

1 Start printing from the application which has been used to create the document: Normally, printing can be started by selecting **Print** from the **File** menu.

2 The Print dialog box will appear.
Make sure that **Minolta Di470 PCL6** is displayed for **Name** in **Printer**, and click the **Properties** button.

...

Note

Some applications allow you to set Copies and Collate (Sort) in the Print dialog box. To ensure proper printing operation, however, turn OFF these items of the application, and make the necessary settings in each tab of the printer driver.

3 The Minolta Di470 PCL6 Properties dialog box will appear.
If the **Paper** tab is not displayed, click the **Paper** tab.

4 Make sure that the size of the document created with the application is displayed in **Original Document Size**.

5 Specify **Output Paper Size** in **Output Paper Size** item and select the print page size.

6 Select **Fit to Paper** and specify the zoom ratio matching the output paper.

Tip

*When **Fit to Paper** is not specified, zoom ratio in **scaling** will be effective.*

7 Make other settings as necessary and click the **OK** button.

8 The Print dialog box will reappear. Click the **OK** button.

9 The data will then be transferred to the machine and printing will soon start.

Note

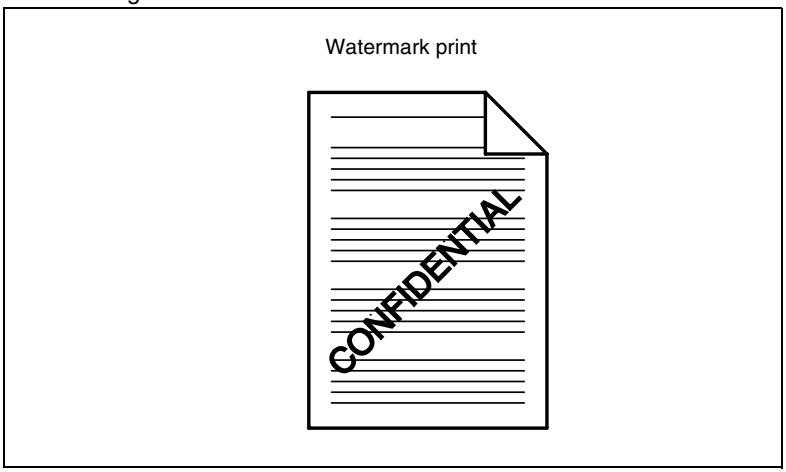
If a paper size that does not match the paper loaded in the machine is selected, the machine will display a message that prompts you to load paper in the manual feed port, entering standby state.

***Fit to Paper** cannot be selected if **Custom Paper** is selected in **Output Paper Size**. To enlarge or reduce the image, directly input the zoom ratio in **Scaling**.*

7.6 Printing pages with watermarks

Overview

This section explains how to print pages with text (e.g. Confidential, Draft) in the background.



Procedure

Depending on environment used, Watermark may not be edited. If registration is necessary, perform registration first, referring to Appendix A (p. 12-1).

1 Start printing from the application which has been used to create the document: Normally, printing can be started by selecting **Print** from the **File** menu.

2 The Print dialog box will appear.
Make sure that **Minolta Di470 PCL6** is displayed for **Name** in **Printer**, and click the **Properties** button.

...

Note

Some applications allow you to set Copies and Collate (Sort) in the Print dialog box. To ensure proper printing operation, however, turn OFF these items of the application, and make the necessary settings in each tab of the printer driver.

3 The Minolta Di470 PCL6 Properties dialog box will appear.

4 Make sure that all setting items, such as **Original Document Size**, are correctly set on the **Paper** tab.

5 Click the **Setup** tab and select **DO NOT COPY** in **Watermark**.

6 Select the page on which to print the watermark.

7 If you want to change the position or style of an existing watermark, click the **Edit** button: Watermark dialog box, from which you can edit text, will appear.
Specify **Text** and text style, **Angle**, and **Position**.

...

Tip

*If you cannot find an appropriate watermark, click **New** button: You can create new watermark.*

For the position, specify the distance from the center.

8 After the settings have been made, click the **OK** button to close the dialog box.

9 Make other settings as necessary and click the **OK** button.

10 The Print dialog box will reappear. Click the **OK** button.

11 The data will then be transferred to the machine and printing will soon start.

...

Note

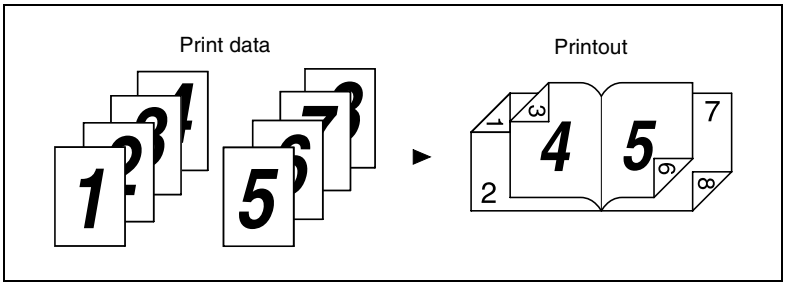
This function may not be effective in some applications.

7.7 Specifying booklet printing

Overview

This section explains how to layout and print four pages of a document on both sides of a single sheet of paper so that the printout may be folded at its center to form a booklet.

To use this function, a Dup + 2way Tray, Dup + LCC or Duplex Cabinet must be mounted on the machine.



Procedure

1 Start printing from the application which has been used to create the document: Normally, printing can be started by selecting **Print** from the **File** menu.

2 The Print dialog box will appear.
Make sure that **Minolta Di470 PCL6** is displayed for **Name** in **Printer**, and click the **Properties** button.

...

Note

Some applications allow you to set Copies and Collate (Sort) in the Print dialog box. To ensure proper printing operation, however, turn OFF these items of the application, and make the necessary settings in each tab of the printer driver.

3 The Minolta Di470 PCL6 Properties dialog box will appear.

4 Make sure that the size of the document created with the application is displayed in **Original Document Size** on the **Paper** tab.

5 Select **Collated** for **Collate**.

6 Click the **Setup** tab.

7 Select **Booklet Left Binding** in **Duplex/Booklet**.

8 Make other settings as necessary and click the **OK** button.

9 The Print dialog box will reappear. Click the **OK** button.

10 The data will then be transferred to the machine and printing will soon start.

Note

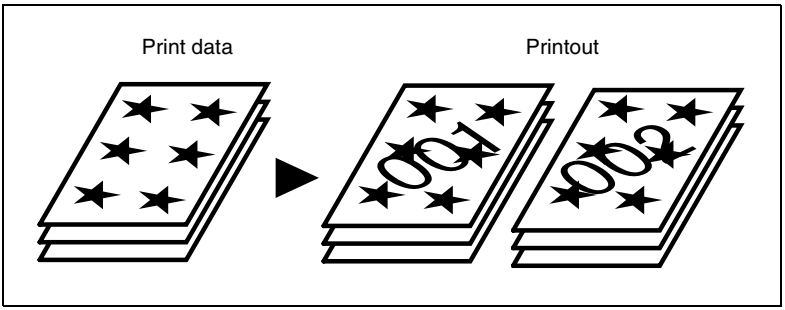
If the original document for a printing job contains a page of a different size or different direction from the others, and this document is printed, a void image or overlapped image could result.

7.8 Printing pages with a distribution number

Overview

This section explains how to print a distribution number in the background for each copy set.

To use this function, a Hard Disk Drive in Copier must be mounted on the machine.



Note
The orientation of the distribution number may not match that of the print image.

Procedure

1 Start printing from the application which has been used to create the document: Normally, printing can be started by selecting **Print** from the **File** menu.

2 The Print dialog box will appear.
Make sure that **Minolta Di470 PCL6** is displayed for **Name** in **Printer**, and click the **Properties** button.

Note
Some applications allow you to set Copies and Collate (Sort) in the Print dialog box. To ensure proper printing operation, however, turn OFF these items of the application, and make the necessary settings in each tab of the printer driver.

3 The Minolta Di470 PCL6 Properties dialog box will appear.

4 Make sure that all setting items, such as **Original Document Size**, are correctly set on the **Paper** tab.

5 Select **Collated** for **Collate**.

6 Click the **Job Management** tab and check the **Distribution Number**.

7 Select the page on which to print the distribution number, either 1st Page only or All Pages.

8 Specify the starting distribution number for **Starting Number**.

9 Make other settings as necessary and click the **OK** button.

10 The Print dialog box will reappear. Click the **OK** button.

11 The data will then be transferred to the machine and printing will soon start.

7.9 Using the copy track function

Overview

It is possible to keep track of the number of prints produced by each account.

Setting of the machine specifies 100-account management or 1000-account management.

Procedure

1 Start printing from the application which has been used to create the document: Normally, printing can be started by selecting **Print** from the **File** menu.

2 The Print dialog box will appear.
Make sure that **Minolta Di470 PCL6** is displayed for **Name** in **Printer**, and click the **Properties** button.

...

Note
Some applications allow you to set Copies and Collate (Sort) in the Print dialog box. To ensure proper printing operation, however, turn OFF these items of the application, and make the necessary settings in each tab of the printer driver.

3 The Minolta Di470 PCL6 Properties dialog box will appear.

4 Make sure that the size of the document created with the application is displayed in **Original Document Size** on the **Paper** tab.

5 Click the **Job Management** tab.

6 Apply check mark to **Account Code**.

7 Input Access Number.

8 Make other settings as necessary and click the **OK** button.

9 The print dialog box will reappear. Click the **OK** button.

10 The data will then be transferred to the machine and printing will soon start.

Note

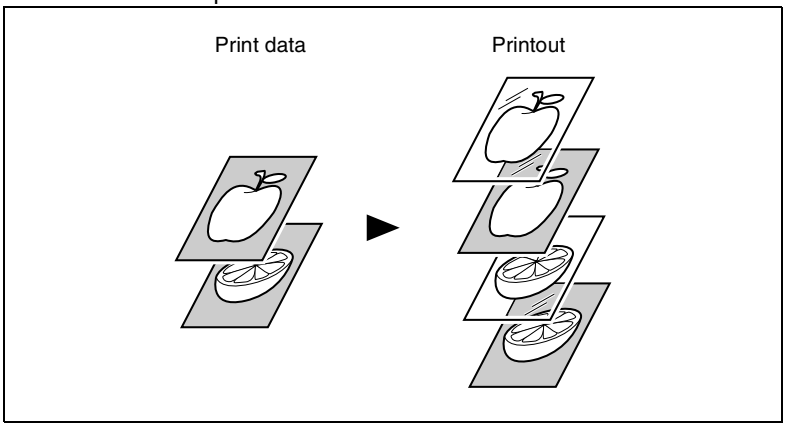
When Account Code is used, printing may not take place unless the account number has been correctly set.

To clear the Account Code function, type any number in the Access Number box. If no number is typed in the Access Number box, the message “Access Number Error” will appear and you might not be able to exit from the function.

7.10 Printing on OHP transparencies

Overview

This section explains how to insert a sheet of paper (interleaf) between sheets of OHP transparencies when printing on sheets of OHP transparencies. This interleaf may be left blank or have the same data printed on it as the OHP transparencies.



Procedure

1 Start printing from the application which has been used to create the document: Normally, printing can be started by selecting **Print** from the **File** menu.

2 The Print dialog box will appear.
Make sure that **Minolta Di470 PCL6** is displayed for **Name** in **Printer**, and click the **Properties** button.

...

Note

Some applications allow you to set Copies and Collate (Sort) in the Print dialog box. To ensure proper printing operation, however, turn OFF these items of the application, and make the necessary settings in each tab of the printer driver.

3 The Minolta Di470 PCL6 Properties dialog box will appear.

4 Make sure that all setting items, such as **Original Document Size**, are correctly set on the **Paper** tab.

5 Click the **Setup** tab and select the paper source for OHP transparencies in **Paper Source**.

...

Note

Paper source for OHP film is Manual Feed only.

6 Click the **Detail of Paper Source**: Detail of Paper Source dialog box will appear.

7 Apply check mark to **OHP Interleaving**.

8 Select the **with Image** box if you want the OHP data printed on the interleaves.

9 Select the paper source for interleaves in **Interleaving Paper Source**.

...

Note

The same paper source as that used for OHP transparencies cannot be specified as paper source for interleaves.

10 Click the **OK** button.

11 Make other settings as necessary and click the **OK** button.

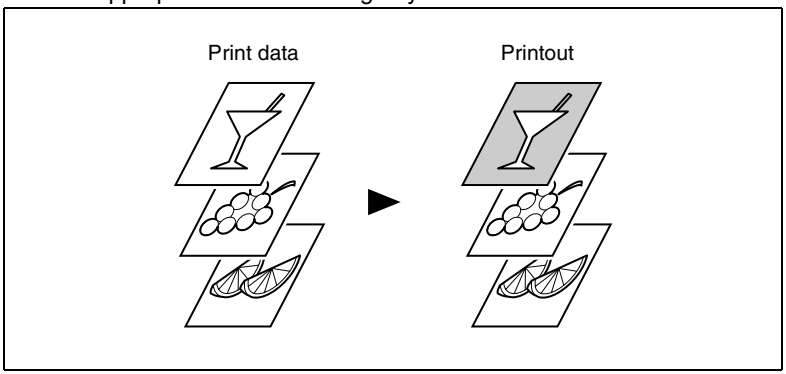
12 The Print dialog box will reappear. Click the **OK** button.

13 The data will then be transferred to the machine and printing will soon start.

7.11 Adding a cover to each copy set

Overview

This section explains how to add a front cover and/or a back cover to each of your copy sets. Four different modes are available to choose from. Select the appropriate one according to your needs.



Procedure

1 Start printing from the application which has been used to create the document: Normally, printing can be started by selecting **Print** from the **File** menu.

2 The Print dialog box will appear.
Make sure that **Minolta Di470 PCL6** is displayed for **Name** in **Printer**, and click the **Properties** button.

...

Note

Some applications allow you to set Copies and Collate (Sort) in the Print dialog box. To ensure proper printing operation, however, turn OFF these items of the application, and make the necessary settings in each tab of the printer driver.

3 The Minolta Di470 PCL6 Properties dialog box will appear.

4 Make sure that all setting items, such as **Original Document Size**, are correctly set on the **Paper** tab.

5 Click the **Setup** tab and select the paper source for text in **Paper Source**.

Note
Paper sources for text are Manual Feed, Tray 1, 2, 3, 4, LCC and LCT.

6 Click the **Detail of Paper Source**: Detail of Paper Source dialog box will appear.

7 Apply check mark to **Front Cover Page**.

8 Select the **with Image** box if you want data printed on the front cover.

9 Select whether to add a back cover and, if the back cover is to be added, select whether to print data on the back cover using **Back Cover Page** and **with Image**.

10 Select the paper source for the front/back cover under **Cover Paper Source**.

Note
Paper sources for cover page are Manual Feed, Tray 1, 2, 3, 4, LCC and LCT.

11 Click the **OK** button.

12 Make other settings as necessary and click the **OK** button.

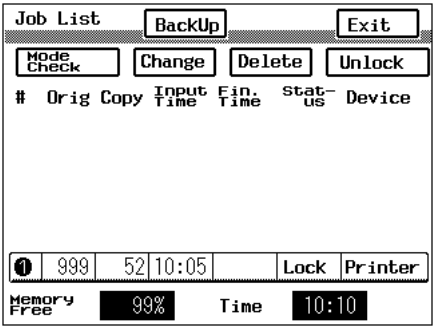
13 The Print dialog box will reappear. Click the **OK** button.

14 The data will then be transferred to the machine and printing will soon start.

7.12 Using the lock job (print PC confidential) function

Overview

Lock Job allows you to keep a particular document confidential so that document can be printed only after a password is entered on the machine.



Procedure on the printer driver side

1 Start printing from the application which has been used to create the document: Normally, printing can be started by selecting **Print** from the **File** menu.

2 The Print dialog box will appear.
Make sure that **Minolta Di470 PCL6** is displayed for **Name** in **Printer**, and click the **Properties** button.

...

Note

Some Applications allow you to set Copies and Collate (Sort) in the Print dialog box. To ensure proper printing operation, however, turn OFF these items of the application, and make the necessary settings in each tab of the printer driver.

3 The Minolta Di470 PCL6 Properties dialog box will appear.

4 Make sure that all setting items, such as **Original Document Size**, are correctly set on the **Paper** tab.

5 Click the **Job Management** tab.

6 Apply check mark to **Lock Job**.

7 Input password.

...

Note

To clear the Lock Job function, type any number in the Password box. If no number is typed in the Password box, the message "Password Error" will appear and you might not be able to exit from the function.

...

Tip

Password is 4-digit number, from 0002 to 9999. If you enter a 3-digit number for password, it will be regarded as 4-digit number, automatically adding "0" to the head.

8 Make other settings as necessary and click the **OK** button.

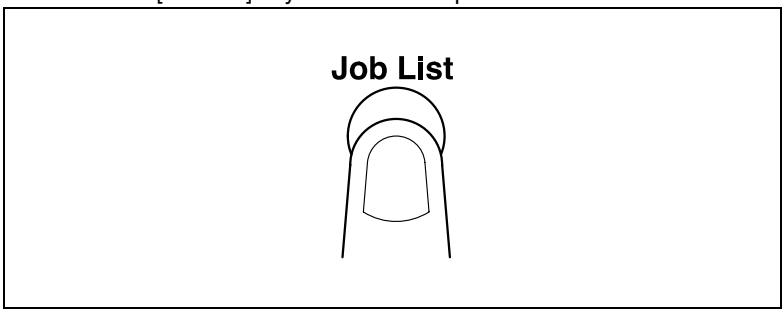
9 The Print dialog box will appear. Click the **OK** button.

10 The data will be transferred to the machine, but printing will not yet start.

Procedure on the machine side (Unlocking a job)

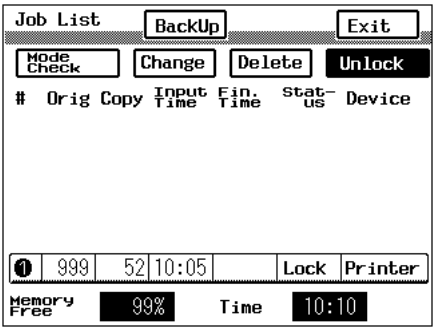
After the data has been transferred to the machine, operate the machine to start printing.

1 Press the [Job List] key on the control panel.



2 Touch the [Unlock] key.

Note
If the Job List does not appear, touch [Next] or [Back Up].



3 Input password.

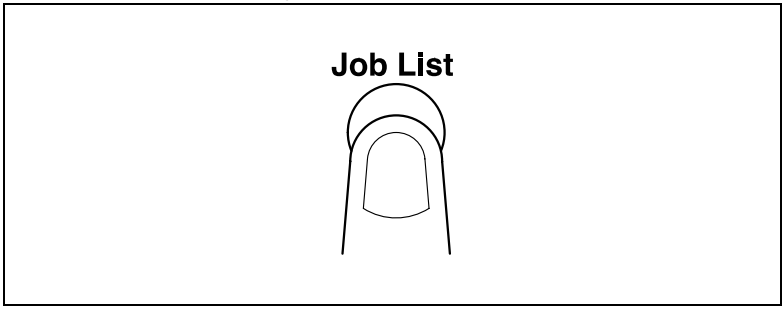
Note
All jobs, whose preprogrammed passwords match the password entered, are "unlocked."

4 The job is "unlocked" and printing will start.

Procedure on the machine side (Deleting a job)

After the data has been transferred to the machine, it can be deleted without being printed.

1 Press the [Job List] key on the control panel.

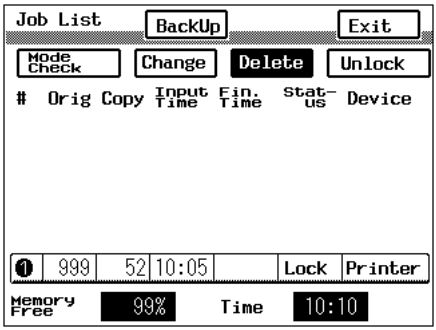


2 Touch the [Delete] key.

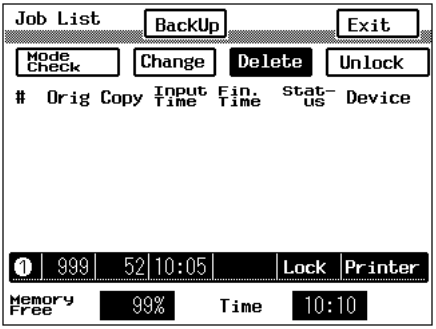
...

Note

If the Job List does not appear, touch [Next] or [Back Up].



3 Select job to be deleted.



4 Enter a 4-digit password from the 10-key Pad.

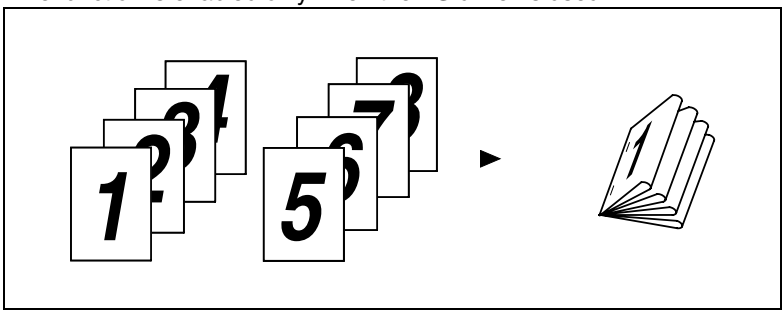
5 This deletes the job from the job list.

7.13 Using the folding function

Overview

A multi-page document prepared in an application can be finished into a book form through Half Folding and Staple.

To use this function, a Folding Finisher must be mounted on the machine. The function is enabled only when the PS driver is used.



Procedure

1 Start printing from the application which has been used to create the document: Normally, printing can be started by selecting **Print** from the **File** menu.

2 The Print dialog box will appear.
Make sure that **Minolta Di470 PS** is displayed for **Name** in **Printer**, and click the **Properties** button.

...

Note

Some Applications allow you to set Copies and Collate (Sort) in the Print dialog box. To ensure proper printing operation, however, turn OFF these items of the application, and make the necessary settings in each tab of the printer driver.

3 The Minolta Di470 PS Properties dialog box will appear.

4 Make sure that **Original Document Size** is correctly set on the **Paper** tab.

5 Check the **Output Paper Size** box and select **11 × 17**.

6 Select **2 up** in **N-up**.

7 Click **N-up Style** to open its dialog box. Then, set **Page Location** to **Horiz. Ascending** and click the **OK** button.

8 Click “Detail Of Output Setting” to open the dialog box.

9 Specify **Half Folding** under **Folding**.

10 Specify **Long Edge** under **Staple**.

11 Click the **OK** button.

12 Make other settings as necessary and click the **OK** button.

13 The Print dialog box will reappear. Click the **OK** button.

14 The data will then be transferred to the machine and printing will soon start.

7.14 Using the settings function

Overview

Frequently used groupings of print settings can be stored and called up as necessary for application in actual print jobs.

Procedure

Operations with “Easy Set” are storing, calling up and deleting.

Depending on environment used, number of registrations will be different: Refer to Appendix A (p. 12-9) for details.

Using the settings stored for a current print job

1 Start printing from the application which has been used to create the document: Normally, printing can be started by selecting **Print** from the **File** menu.

2 The Print dialog box will appear.
Make sure that **Minolta Di470 PCL6** is displayed for **Name** in **Printer**, and click the **Properties** button.

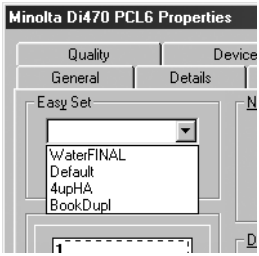
...

Note

Some Applications allow you to set Copies and Collate (Sort) in the Print dialog box. To ensure proper printing operation, however, turn OFF these items of the application, and make the necessary settings in each tab of the printer driver.

3 The Minolta Di470 PCL6 dialog box will appear.

4 Click the down-arrow ▼ of **Easy Set Name** and from subsequent menu, select the Title name to be used.



5 Dialog box for confirmation will appear. Click the **OK** button. The setting data will then be read to the driver software.

6 Click the **OK** button.

7 The Print dialog box will appear. Click the **OK** button.

8 The data will then be transferred to the machine and printing will soon start.

Storing settings

1 Start printing from the application which has been used to create the document: Normally, printing can be started by selecting **Print** from the **File** menu.

2 The Print dialog box will appear.
Make sure that **Minolta Di470 PCL6** is displayed for **Name** in **Printer**, and click the **Properties** button.

Note
Some Applications allow you to set Copies and Collate (Sort) in the Print dialog box. To ensure proper printing operation, however, turn OFF these items of the application, and make the necessary settings in each tab of the printer driver.

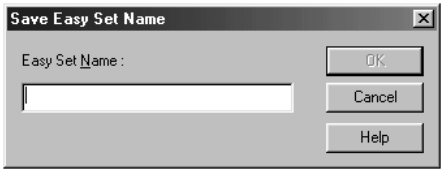
3 The Minolta Di470 PCL6 Properties dialog box will appear.

4 Make settings in **Setup**, **Paper**, **Quality**, **Job Management** and **PostScript** properties as necessary.

5 Click the **Save** button.

Tip
*If setting is changed as in step 4, the Easy Set Name becomes **Untitled** and the **Save** button will appear.*

6 The Save Easy Set Name dialog box will appear. Input the **Easy Set Name** to be registered and click the **OK** button.



Tip

*If the same **Easy Set Name** already exists, a dialog box asking whether it should be over-written or not will appear.*

7 Click the **OK** button.

8 The Print dialog box will then reappear. To start printing immediately, click the **OK** button: The data will be transferred to the machine and printing will soon start. If printing is not to be done now, click the **Cancel** button.

Note

Settings can be stored from the printer properties dialog box opened from the Printers window.

With PS, it is not possible to save the settings if the function has been activated from the application. Start the function using the printer icon.

*The same procedure also applies when the printer properties dialog box is used. However, be sure to click the **Cancel** button to close the properties dialog box: If it is closed by clicking the **OK** button, the settings will become the default values when the properties dialog box is accessed from the application.*

Deleting settings which have been stored

1 Start printing from the application which has been used to create the document: Normally, printing can be started by selecting **Print** from the **File** menu.

2 The Print dialog box will appear.
Make sure that **Minolta Di470 PCL6** is displayed for **Name** in **Printer**, and click the **Properties** button.

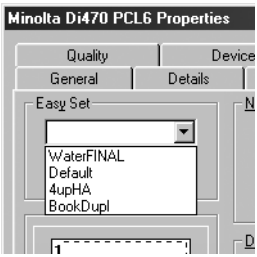
...

Note

Some Applications allow you to set Copies and Collate (Sort) in the Print dialog box. To ensure proper printing operation, however, turn OFF these items of the application, and make the necessary settings in each property sheet of the printer driver.

3 The Minolta Di470 PCL6 Properties dialog box will appear.

4 Click the down arrow ▼ of **Easy Set Name** and, from subsequent menu, select the name to be used.



5 Dialog box for confirmation will appear. Click the **OK** button: The setting data will then be read to the driver software.

6 Click the **Delete** button.

7 Dialog box for confirmation will appear. Click the **OK** button: The title name will disappear and the setting data will be deleted.

Note

If the setting contents are changed before deleting, the Easy Set Name will change to ***Untitled*** *and the* ***Delete*** *button will change to the* ***Save*** *button. Deleting cannot be performed in this status.*

8 Click the **OK** button.

9 The print dialog box will then reappear. Click the **Cancel** button.

Note

Settings can also be deleted from the printer icon property sheet opened from the Printers window.

With PS, it is not possible to save the settings if the function has been activated from the application: Start the function using the printer icon.

The detailed print settings remain valid even after the Easy Set Name has been cleared from the options list.

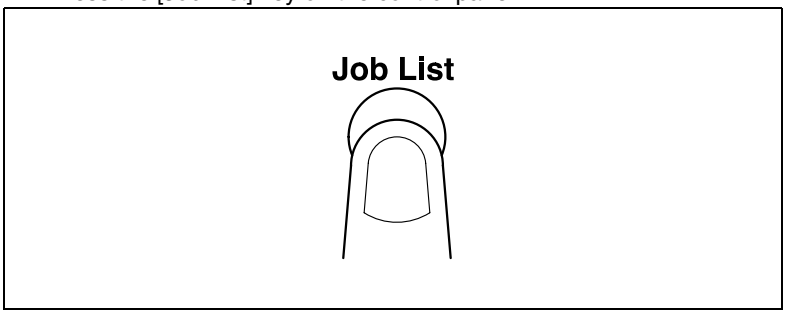
7.15 Confirming that the data has been transferred to the machine

Overview

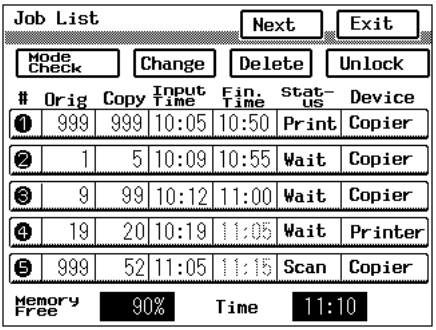
Status of data transferred from the personal computer will be displayed in Job List.

Procedure

1 Press the [Job List] key on the control panel.



2 Job list will be displayed.



Note

For printing a lock job, refer to “Procedure on the machine side (Unlocking a job)” (p. 7-23) in “7.12 Using the lock job (print PC confidential) function”.

For unlocking the job, refer to “Procedure on the machine side (Deleting a job)” (p. 7-25) in “7.12 Using the lock job (print PC confidential) function”.

8 Network Interface Card

8.1 Outline

The following shows the general outline of this chapter.

- “Getting ready”
- “Setting up the network card”

Read the section that covers your particular network environment.

- “Windows configuration”
- “NetWare configuration”
- “Macintosh configuration”

Refer to these sections as required.

- “Using the utility software”

Read the following sections when necessary.

- “Troubleshooting”
- “Jumper switch setting”
- “Specifications”

8.2 Getting ready

This Network Card is a multi-protocol network card that provides Ethernet connection for the Minolta Pi4700e printer controller and offers the following features.

- Automatic Ethernet type detection (10BaseT, 100BaseT)
- Fully transparent AppleTalk printing support for the Macintosh, including support for binary PostScript printing.
- Peer-to-peer printing program allows printing on a network without going through a server
  - Peer-to-Peer Printing with TCP/IP (Windows 95/98/Me/NT 4.0)
  - Peer-to-Peer Printing with IPX/SPX (Windows 95/98/Me)
- Novell NetWare PSERVER support under bindery base or Novell Directory Services (NDS)
- lpr/lpd functions under TCP/IP
- SNMP control using MIB-II and private MIB
  SNMP support using standard MIB on a compatible printer or printer-specific MIB

- Onboard HTTP server allowing configuration of network function settings using a Web browser
- Direct printing from an IPP client
- SLP (Service Location Protocol) support

Utility software (on the CD-ROM)

The following items are contained in the nicutlty folder on the CD-ROM that comes with the printer controller.

- Discovery Program
  - IPX/IP Management Access Program (MAP)
- Peer-to-Peer Printing Programs
  See “3 Network Settings” for details.
  - IP Peer-to-Peer Printing Program
  - IPX Peer-to-Peer Printing Program
- BOOTP Program
  - BootPL32.exe
- NetWare Setup Utility Program
  - NWSetup
- Macintosh Utility Program
  - NIManage (AppleTalk Utility)
- UNIX TCP/IP Utility Programs
- MIB Setting File

The ReadMe file on the CD-ROM contains the latest information about each of the network software applications. Be sure to read the ReadMe file before using the network software.

System requirements

The following table describes the system requirements for using the Network Card hardware and software.

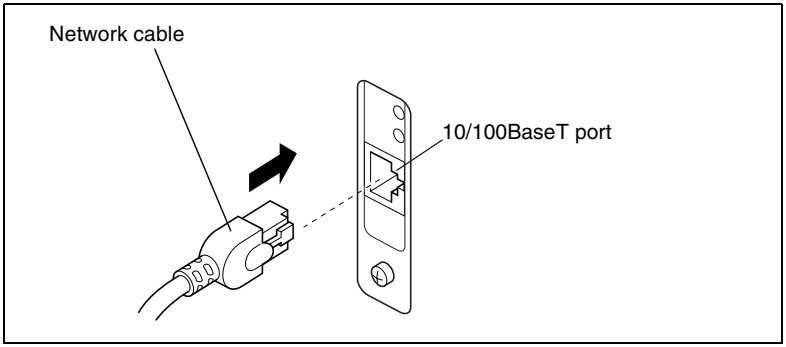
Version of Protocol or NOS	Novell NetWare Version 4.x or 5.x
	Macintosh System 7.x, 8.x, 9.x, Mac OS X
	Windows, or LAN Server systems supporting lpr over TCP/IP
	Red Hat Linux 6.1 or later, SuSE Linux 6.3 or later, OpenLinux 2.3 or later, Turbolinux 4.0 or later.
Software	Novell NetWare printing requires NetWare Capture, NPRINT and PCONSOLE (later than 1.0) utilities. NWSetup requires Windows 95/98/Me/2000 or Windows NT 4.0, and the Novell 32-bit client.
	The IP Peer-to-Peer utility requires Windows NT 4.0; Windows 95/98/Me.
	The IPX Peer-to-Peer utility requires Windows 95/98/Me.
	The MAP utility requires Windows NT 4.0; Windows 95/98/Me/2000. MAP also requires a browser such as Microsoft Internet Explorer or Netscape.
	TCP/IP setup and maintenance may be done with Telnet. Monitoring and maintenance with HTTP requires a suitable Internet Web browser program supporting HTML.
	AppleTalk printing requires printer PPD appropriate to the Digital Copier. AppleTalk NIManage Utility Program is provided for setup and maintenance (except Mac OS X).
Hardware	Support for 10 or 100 megabit Ethernet networks: 10/100BaseT (twisted pair cables) and hardware
	CD-ROM drive

8.3 Setting up the network card

Connecting a network cable

1 Make sure that Digital Copier power is turned off.

2 Connect the network cable to the Network Card.



❍ Insert the plug into the 10-100BaseT port on the rear panel of the network card and press it in until you hear it click securely into place.

3 Power up the Digital Copier and check for abnormalities.

...

Important!
Use only Category 5 shielded 10/100BaseT cable.

Configuring the network card

You must first configure the Network Card and your computer before you can print using the Network Card. The settings you need to make depend on the configuration of your network environment. sections 4 through 6 of this chapter describe configurations for the environments listed below. Follow the configurations procedure for the operating system you are using.

- Section 4 - Windows configuration
  Network printing in a Windows 95/98/Me/2000/XP/NT environment
- Section 5 - NetWare configuration
  Network printing in a NetWare environment
- Section 6 - Macintosh configuration
  Network printing in a Macintosh environment

8.4 Windows configuration

Refer to “3 Network Settings” (p. 3-1) for details on how to perform network printing in a Windows environment.

8.5 NetWare configuration

This section provides details on how to configure a Novell NetWare server in order to print from a NetWare client. Follow the procedures listed below to configure the NetWare server from a NetWare client.

Using NWSetup

NWSetup is a utility program that comes bundled with the Network Card, which simplifies configuration of the NetWare file server and Network Card. See “NWSetup (Windows)” (p. 8-38).

Using NetWare Client

- **NetWare 4.x configuration in bindery services emulation**
  This section describes how to configure the Network Card with NetWare 4.x bindery services emulation. See “NetWare 4.x Configuration Using Bindery Emulation” (p. 8-5).
- **Novell Directory Services configuration**
  This section describes how to configure the Network Card with NetWare 4.x directory services. See “Configuration Using Novell Directory Services” (p. 8-8).

NetWare 4.x Configuration Using Bindery Emulation

Novel NetWare 4.x supports two operation modes: NDS and bindery services emulation. This chapter explains how to configure NetWare 4.x using bindery emulation. For information about NDS, see “Configuration Using Novell Directory Services” (p. 8-8).

These two services run simultaneously and transparently to each other. The Network Card can be configured to operate in the bindery services mode only or under NDS. Under NDS, the Network Card will also service older file servers operating in bindery mode.

...

Note

The Network Card will not be able to find its file servers if it is not correctly configured for NDS operation and the bindery services mode is not running. You can use MAP or a Web browser to check the configuration of the Network Card. See “Management Access Program (Windows)” (p. 8-28) for more information.

Confirming the Bindery Context

Before installing the Network Card under Novell NetWare 4.x in the bindery emulation mode, you should first confirm whether the server has a bindery context (name assigned to the server by the bindery services mode). If it doesn't, install in the NDS mode.

Bindery context is required to install the Network Card in the bindery emulation mode. Use the following procedure to confirm whether your server has bindery context.

1 On the NetWare 4.x server, type:
`load install` Enter

2 Select **Maintenance/Selective Install** from the menu.

3 On the **Installation Options** menu, select **NCF File Options**.

4 From the menu of available NCF file options, select **Edit AUTOEXEC.NCF**.

5 Search the file and check to see if it contains a statement similar to the one shown below.
`SET BINDERY CONTEXT=OU=ENG`

OU=ENG is an example file server context. Use your own file server context in place of **OU=ENG**.

6 At the console prompt, type the **SET BINDER CONTEXT** statement exactly as you entered it in your AUTOEXEC.NCF file.

...

Note

The command you type at the console prompt takes effect immediately. The contents defined in the AUTOEXEC.NCF file take effect when the server is shut down and then restarted.

Configuring in the Bindery Mode

After you confirm that your server has a bindery context, use the following procedure to configure the Network Card.

1 Log into the server where you want to install the print server as supervisor or as a user with equivalent privileges.

2 Type **PCONSOLE** and press [Enter] to display the **Available Options** screen.

3 Press [F4] to enter the bindery mode.

...

Note

If a message appears telling you to log in with bindery connection, it means that the attached server does not have bindery mode enabled. Either perform the procedure under "Confirming the Bindery Context" or log onto a server with bindery services enabled.

4 On the **Available Options** screen, select **Quick Setup** and then press [Enter].

Use Quick Setup to connect the print server, print queue, and printer you want to use. You will be able to change this settings later if you want.

```
                    Print Services Quick Setup

Print server:        MLT_160150
New printer:         P1
New print queue:     Q1

Print queue volume: LEFT_SYS
Banner type:         Text

Printer type:        Parallel
   Location:       Manual Load
   Interrupt:      None (polled mode)
   Port:           LPT1
```

5 Select **Print Server** and then press [F3] to modify the entry.

6 Type the name of the print server you want to use into the **New print server** field, and then press [Enter].

Note

You can use MAP or a Web browser to change the print server name. See "Management Access Program (Windows)" (p. 8-28) for more information.

The initial default print server name is: MLT_<serial number>.

7 Press [↓] to move the cursor to **New printer**, type the printer name, and then press [Enter].

8 Press [↓] to move the cursor to **New print queue**, type the print queue name, and then press [Enter].

9 Press [↓] to move the cursor to **Printer type** and then press [Enter]. From the printer type list, select **Other/Unknown** and then press [Enter].

10 After all the settings are the way you want, press [F10] to save the configuration.
Repeat steps 5 through 10 for each file server that the print server services.

After you are finished, select **Print Queues** or **Print Servers** on the **Available Options** screen when you want to view, delete, or edit print server or queue settings.

Configuration Using Novell Directory Services

Novell Directory Services (NDS) provides a more advanced approach to network management than previous versions of NetWare. It stores and tracks all network objects. A Version 4.x or 5.x server must have NDS installed in order to function.

This means every NetWare 4.x or 5.x server is a directory server, because it services printers, print servers, print queues, and other named directory objects. With appropriate privileges, you can create a print server object and assign them network-wide contexts (or locations), which eliminates the need to perform troublesome setup of print servers on each individual network server.

NDS provides true enterprise networking based not on individually defined physical sites, but rather on a shared network database. The result is vastly improved print server setup and management.

The Directory Information Base (DIB) is used to store information about servers and services, users, printers, gateways, etc. It is a distributed database that allows access to data anywhere on the network, regardless of where it is stored. Pre-4.x NetWare versions provide the same data as DIB, but the data is stored in the NetWare bindery.

DIB is designed for more flexible access, more specific security, and, because it is distributed, a design that allows partitioning. Unlike bindery's flat file structure, the DIB directory uses an object-oriented structure, enabling network-oriented access as opposed to bindery's server-oriented access.

The bindery emulation mode provides the directory with downward compatibility with NetWare bindery. This section explains operation of the print server with a 4.x NetWare system in bindery emulation mode. Once bindery emulation is enabled, NDS receives bindery requests and responds just as if a bindery existed on the NetWare server being accessed.

It should be noted here that information obtained from a bindery query may not be stored on the server because the directory is a partitioned and distributed database. Though a NetWare 4.x server is not operating from a bindery, applications making bindery requests do not know the difference.

NWADMIN can be used to configure the printer in NDS. Before printing, you must use the procedures below to configure NDS, and to set up the Network Card with NDS context and tree.

The procedures for using NWADMIN to create the printer, print server, and other print queue objects are provided below. After you create these objects you must then associate them with each other. Under NetWare 4.x you can keep bindery resources on any server if you want by declaring a SET statement in your AUTOEXEC.NCF file.

If you want, you can also use PCONSOLE instead of NWADMIN. PCONSOLE can also be used to set up static print server information, such as which queues to service and whom to notify in case of problems. See the Novell NetWare documentation for details about using PCONSOLE for NDS.

...

Note

Some NetWare servers require that bindery context be configured on the file server, even when using the NDS mode.

Creating a Printer Object

1 Click the **NWADMIN** icon in the **NetWare Tools** group in Windows. This displays the NetWare Administrator dialog box. To access your directory tree, open a browser window by clicking the **Tools** menu item and then the **Browse** item.

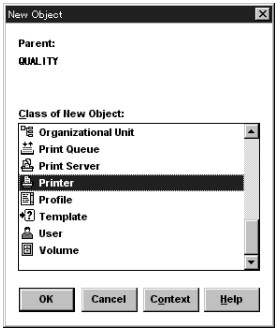
2 Highlight the organizational unit or organization where you want to create the print service in the directory tree, select **Object**, and then on the pop up menu select **Create**.

...

Note

*If you want, you can also create objects in NWADMIN by selecting an organizational unit, right-clicking to display a pop-up menu, and left-clicking **Create** to display the **New Object** window. Then you would continue with the steps below.*

3 When the **New Object** window shown below appears, select the **Printer** icon on the **Class of New Object** list and then click the **OK** button.



4 On the **Create Printer** window that appears, type the printer name you want into the **Printer Name** field and then click the **Create** button.

Creating a Print Server Object

1 Highlight **Organizational Unit** again.

2 Select **Object** from the main menu, and then select **Create** on the pop up menu that appears.

3 On the **New Object** window, select the **Print Server Name** icon on the Class of **New Object** list, and then click the **OK** button.

4 On the **Create Print Server** window that appears, type the print server name you want into the **Print Server Name** field and then click the **Create** button.

Creating a Print Queue Object

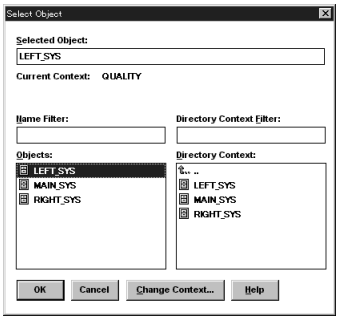
1 Highlight **Organizational Unit** again.

2 Select **Object** from the main menu, and then select **Create** on the pop up menu that appears.

3 On the **New Object** window that appears, select the **Print Queue** icon on the **Class of New Object** list, and then click the **OK** button.

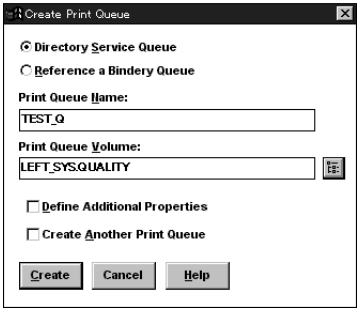
4 Click the **Directory Services Queue** button, type the names you want into the **Print Queue Name** and **Print Queue Volume** fields, and then click the **Create** button.

- If you do not know the print queue volume name (the name of the hard disk you will be accessing), click the icon to the right of the **Print Queue Volume** field to display the **Select Object** window shown below. **Objects** lists volumes that you can choose.
- If you cannot find the volume you want in the list, click **Directory Context** items until you find the volume where you want the queue to reside.



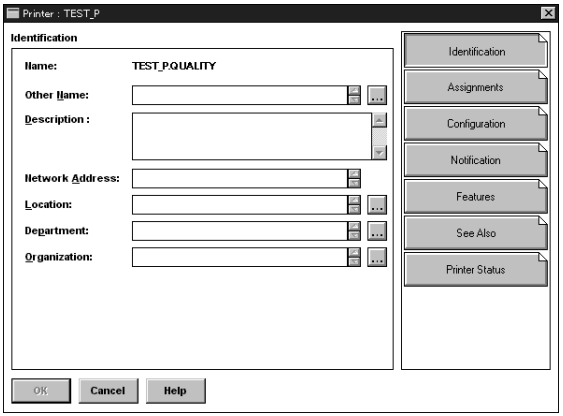
5 Click the object (hard drive) you want and it appears in the **Selected Object** field.

6 Click **OK** and the full volume appears in the **Print Queue Volume** field. Finally, click the **Create** button.

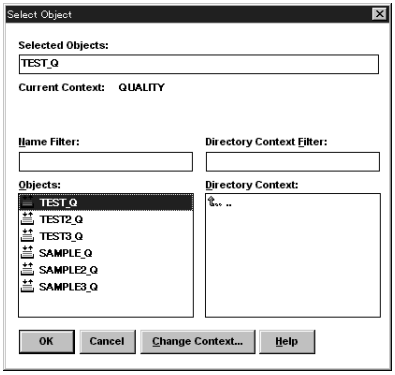


Assigning a Printer Object

1 Navigate to the directory tree, and double-click a printer object you just created. This displays the **Printer** window.

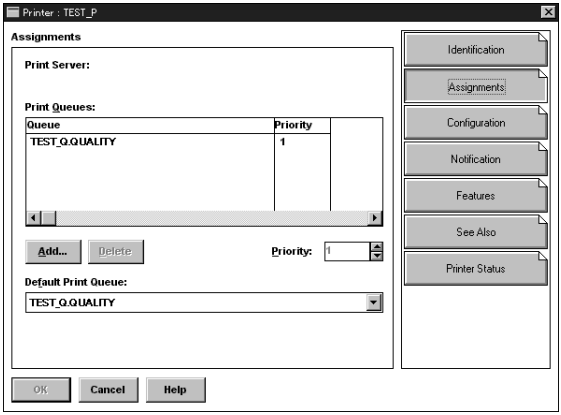


2 Click the **Assignments** button, and then click the **Add** button to display the **Select Object** window.



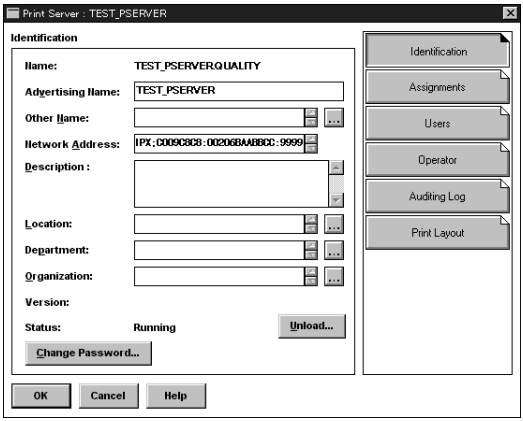
3 From the **Objects** list, select a print queue you just created and then click the **OK** button to add the print queue to the **Print Queues** box in the **Printer** window.

4 Click the **OK** button again.

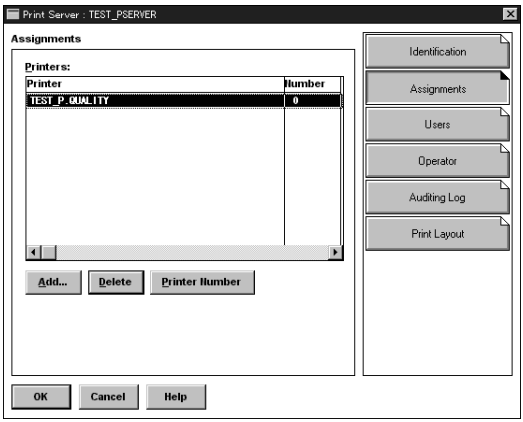


Assigning a Print Server Object

1 At the directory tree, double-click a print server object you just created. This displays the **Print Server** window.



2 Click the **Assignments** button, and then click the **Add** button to display the **Select Object** window.

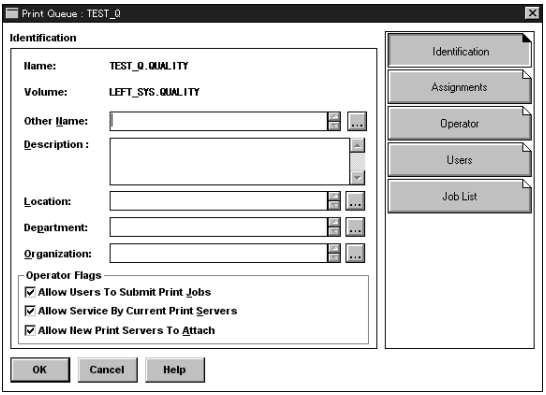


3 From the **Objects** list, select the printer object you just created and then click the **OK** button to add the printer (with its context) to the **Prints** box in the **Print Server** window.

4 Click the **OK** button again.

Checking Assignments

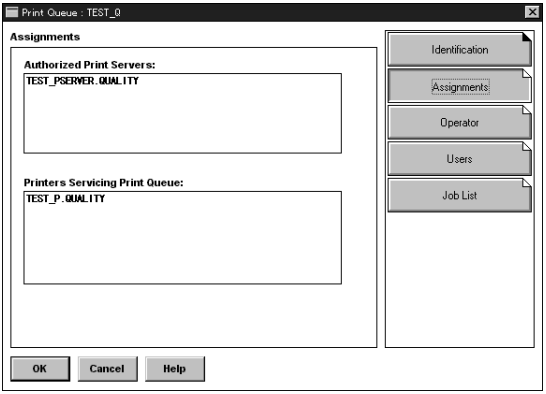
1 At the directory tree, double-click a print queue object you just created. This displays the Print Queue window.



2 Click the **Assignments** button.

The print queue and printer will appear in the proper boxes of the **Printer Queue** window if they are properly configured.

3 Check the contents of the window and then click the **Cancel** button.



Printer Configuration and Reset

After you finish making the NWADMIN settings described above, you must configure and reset the Digital Copier (by powering it down and then back up again) before you can start printing.

Configuring NetWare Enterprise Print Services (NDPS)

NetWare Enterprise Print Services is a Novell software solution built on the Novell Distributed Print Services (NDPS) architecture. NDPS is an advanced printing architecture that can be run on either an IPX or an IP network. NDPS over IP is the native printing approach for NetWare 5.x systems.

NDPS is not yet implemented on printer resident print servers. Instead, a NetWare server includes a gateway that translates between NDPS and a printer-supported protocol or protocols. Gateways exist for PSERVER on IPX, for LPD, and for raw binary sockets printing on IP. Some gateways support NDPS configuration and status information capabilities using SNMP.

The following sections describe the NDPS configuration using Novell-supplied gateways. For networks running NDS over IPX, the gateways use the NetWare PSERVER function implemented on the printer Network Cards. For networks using IP, the Novell-supplied gateway uses the printer LPD capability. Novell is developing an NDPS gateway for printers implementing the IPP protocol; update information on how to set this up will be provided when the capability is released and verified with these printers.

Creating NDPS Manager

An NDPS Manager provides a platform for Printer Agents that reside on the server. An NDPS Manager must be created as an object in the NDS tree before you can create server-based Printer Agents. This procedure is necessary regardless of the gateway or underlying network protocol used.

To create an NDPS Manager object

1 In NetWare Administrator, select the container where you want the NDPS Manager object to reside.

2 Choose **Object — Create — NDPS Manager**.

This causes the Create NDPS Manager Object dialog box to appear.

3 Type a name in the **NDPS Manager Name** field.

4 Browse for the Resident Server where you want this manager assigned.

This can be any server in the current NDS tree in which you have installed NDPS. This will be the only server on which you will be able to load this NDPS Manager. The NDPS Manager will store its database on a volume of this server.

Configuring an NDPS Gateway for IPX

The Novell NDPS gateway for IPX is compatible with queue-based NetWare printing technologies. The following procedure describes how to set up and configure NDPS to interface with the printer via queue-based printing.

Configuring Queue-Based Printers

Prerequisites:

- ✔ The print queue you want to reference must already exist.
- ✔ On a Novell 4.x or 5.x network using IPX, install the printer and the print server.

1 In NetWare Administrator, select the container where you want the NDPS Manager object to reside.

2 Choose **Object** — **Create** — **NDPS Printer**.

This causes the Create NDPS Printer dialog box to appear.

3 Type a name in the **NDPS Printer Name** field.

4 In the **Printer Agent Source** field, select **Create a New Printer Agent** and click the **Create** button.

This causes the Create Printer Agent dialog box to appear.

5 Confirm the Printer Agent name (default is the name of the new printer you are creating) and browse to select the NDPS Manager you want to assign it to.

6 At the Gateway Types window, select the **Novell Printer Gateway**.

This causes the Novell PDS dialog box to appear.

7 Configure the Novell PDS by selecting the Printer Type and Port Handler Type and click the **OK** button.

This starts the **Configure Novell Port Handler** configuration wizard.

8 In the **Connection Type** field, click **Forward Jobs to a Queue** and then click the **Next** button. (The **Port Type** options are grayed out when you select the Queue connection type.)

This displays a screen with the **Queue Name** and **Queue User Name** fields.

9 Provide the queue name and queue user name.

Browse for the target print queue. If no queues are listed, no queues exist in the current context. Browse the tree to find a queue in a different context. The queue you select must exist in the current tree; otherwise, you will need to create a "bindery reference queue" in your own container to allow access to the actual queue. See "Bindery Reference Queues" on page 8-19.

Note

The user you specify may need to log in to the server on which this queue resides. This user must have full privileges to manage this queue.

10 Click the **Finish** button.

This causes the Select Printer Drivers dialog box to appear.

11 Select the printer driver for each client operating system.

- When users install this printer, these drivers will be automatically downloaded to their workstations.
- If the driver you need is not listed, rather than adding the driver to the RMS, you can choose **None** from the top of each list. Users will then be asked to provide a disk with the appropriate driver the first time they install this printer on their workstations.

12 Click the **Continue** button.

The main browser window appears with your new controlled-access printer listed.

Bindery Reference Queues

Novell suggests that you upgrade all of your printers to NDPS as soon as possible. However, you may still want to provide your users with access to queue-based printing resources for a variety of reasons. While connecting to queue-based printers controlled by NetWare 4 or NetWare 5 servers in the current NDS tree can be accomplished directly when you configure a Printer Agent, you may need to create one or more “bindery reference queues” to provide access to printers controlled by a NetWare 3 file server or printers controlled by a NetWare 4 or NetWare 5 server in a different NDS tree.

A bindery reference queue serves as a pointer to a real NetWare queue on both types of servers. After you have created a bindery reference queue to point to a real bindery queue on a target server, you can then configure a Printer Agent to send jobs to that queue just as you would if the queue actually resided on a NetWare 4.x or NetWare 5.x server in the same tree. The following section explains how to accomplish this procedure using NetWare Administrator.

...

Note

If a bindery reference queue already exists, you can use it with NDPS with no modification. A new reference queue object does not need to be created in NDS.

Configuring Bindery Reference Queues

Prerequisites
Before you can create a bindery reference queue, the following requirements must be met:

- ✔ The print queue you want to reference must already exist on the server you want to point to.
- ✔ A bindery object of the same name as the one you are using must exist on that server and must have rights to the print queue you are referencing.

1 In NetWare Administrator, select the container where you want the reference queue to reside.

2 Choose **Object** — **Create**.

This causes the New Object dialog box to appear.

3 Select **Print Queue**.

This causes the Create Print Queue dialog box to appear.

4 Select **Reference a bindery queue**. (Notice that the dialog box changes when you select this option.)

5 If you want to assign a bindery reference queue name different from the queue's name on the legacy server, enter the reference name in the **Print Queue Name** field.
If you do not want to assign a different reference name, leave the field blank.

6 Browse for a bindery server and queue.

This causes the Network Server and Queue dialog box to appear.

7 Click **List Only Attached Servers** to specify whether you want this option turned on or off.

- To see a list of all available servers, turn off this option. Select the name of the server you want to attach to. Log in to this server at the prompt.

8 Double-click the server you want to use.

A list of queues available on that server appears in the **Queues** list. If you are not attached, you must authenticate to that server.

...

Note

To complete this procedure, you must have rights to the print queue you are referencing and a bindery object of the same name as the one you are using must exist on that server. If no queue names appear, no queues have been defined on that server.

9 Select the queue for which you want to create a reference and click the **OK** button.

This causes the Create Print Queue dialog box to appear again.

10 Click the **Create** button.

The bindery reference queue now appears in your NDS tree.

11 Return to Step 10 of the procedure for configuring a queue-based printer as a controlled-access printer. (See "Configuring Queue-Based Printers" on page 8-17.)

Now that this queue is created, you can configure a Printer Agent to service jobs from a queue or to submit jobs to a queue.

Configuring the Queue-Based Printer Option at the Server Console

1 Do the steps described in “Creating Public-Access Printers in NetWare Administrator”.

2 Choose **Connection Type** — **Queue-Based Printer**.

This causes the **Port Handler Configuration: Queue-Based Printing Mode** screen to appear.

3 Select **Distinguished Queue Name**, press **Enter**, and type an existing queue name. This is the name of the print queue where you want the Printer Agent to place jobs.

- If you press **Enter** or **Insert** again, you can browse the network tree to search for a queue.

4 Highlight **User Name**, press **Enter** or **Insert**, and type the name of the user who will manage the queue just specified.

- To browse the network tree for a valid user, press **Enter** or **Insert**.

5 Click **Accept** and **Exit**.

This causes Printer Agent with its associated Print Device Subsystem (PDS) and Port Handler string to be loaded. The Port Handler configuration utility closes and control returns to the NDPS Manager.

Configuring an NDPS Gateway for IP

Configuring Remote Printers Running in lpr Mode

...

Note

LPR mode works only if TCP/IP is configured correctly. See the documentation on configuring TCP/IP on a NetWare server.

1 From the browser’s **Object** menu for the organization or organizational unit, choose **Create**.

This causes the New Object dialog box to appear.

2 Choose **Object** — **Create** — **NDPS Printer**.

This causes the Create NDPS Printer dialog box to appear.

3 Type a name of your choice in the **NDPS Printer Name** field.

4 At the **Printer Agent Source** field, select **Create a New Printer Agent** and click the **Create** button.

This causes the Create Printer Agent dialog box to appear.

5 Confirm the Printer Agent name (default is the name of the new printer you are creating) and browse to select the NDPS Manager you want to assign it to.

6 In the **Gateway Types** window, select the **Novell Printer Gateway**.

The Novell PDS dialog box opens.

7 Configure the Novell PDS by selecting the Printer Type and Port Type. Then click the **OK** button.

This starts the **Configure Novell Port Handler** configuration wizard.

8 Configure the Connection Type as **Remote** (LPR on IP) and click the **Next** button.

9 Specify the IP address of your host and click the **Finish** button.

10 Select the printer driver for each client operating system.

- When users install this printer, these drivers will be automatically downloaded to their workstations.
- If you choose a Windows 3.x driver but not a Windows 95 or Windows NT driver, a 16-bit driver will be selected. Normally this does not create problems.
- If the driver you need is not listed, rather than adding the driver to the RMS, you can choose **None** from the top of each list. Users will then be asked to provide a disk with the appropriate driver the first time they install this printer on their workstations.

11 Click the **Continue** button.

The main browser window appears with your new controlled-access printer listed.

Using the Remote Printer LPR/TCPIP Option at the Server Console

At the server console, you can create a Printer Agent to represent a printer attached to one of the following:

- A workstation or a remote file server
- Directly to the network, running in lpr mode in a TCP/IP environment and for which no gateway is available

A Printer Agent configured in this mode will emulate a legacy print server (PServer Emulation), and will no longer require the pserver.nlm file.

1 Perform the steps described in “Creating Public-Access Printers in NetWare Administrator”.

2 Choose **Connection Type** — **Remote Printer LPR/TCPIP**.

This causes the **Port Handler Configuration: Remote Printer LPR/TCPIP Mode** screen to appear.

3 Choose IP Host, select Host Type, and provide the information requested.

4 Click **Accept** and **Exit**.

The Printer Agent with its associated Print Device Subsystem and Port Handler string are then loaded. The Port Handler configuration utility closes and control returns to the NDPS Manager.

Public-Access Printers and Controlled-Access Printers

Creating Public-Access Printers in NetWare Administrator

1 Double-click the NDPS Manager object you will be using to control this Printer Agent.

2 In the **Identification** page for the NDPS Manager object you want to use, choose the **Printer Agent List** and click **New**.

This causes the Create Printer Agent dialog box to appear.

3 Type the name of the Printer Agent in the **Printer Agent Name** field.

4 At the **Gateway Types** window, select the **Novell Printer Gateway**.

This causes the Novell PDS dialog box to appear.

5 Configure the Novell PDS by selecting the Printer Type and Port Handler Type and click the **OK** button.

6 Select the printer driver for each client operating system.

- When users install this printer, these drivers will be automatically downloaded to their workstations.
- If the driver you need is not listed, rather than adding the driver to the RMS, you can choose **None** from the top of each list. Users will then be asked to provide a disk with the appropriate driver the first time they install this printer on their workstations.

7 Click **Continue**.

The new Printer Agent will now appear in the **Printer Agent List** window.

Converting Public-Access Printers to Controlled-Access Printers

To take full advantage of the security and management features provided by NDS, you may want to convert public-access printers to controlled-access printers.

For example, if you have used a third-party gateway to get a printer up and running immediately (plug-and-print), the gateway automatically creates a public-access printer. Later, you may want to convert that printer to a controlled-access printer. The following procedure explains how to convert a public-access printer to controlled-access.

Prerequisites
To create a controlled-access printer on your network, you must meet the following prerequisites:

- ✔ Have at least Read, Write, Modify, and Create privileges for the destination container where its associated Printer object will reside
- ✔ Be designated as a manager of the NDPS Manager that will control this Printer Agent
- ✔ Have a Broker running
- ✔ Have an NDPS Manager object
- ✔ Have a public-access printer created

1 In NetWare Administrator, select the container where you want the printer to reside.

2 Choose **Object** — **Create** — **NDPS Printer**.

This causes the Create NDPS Printer dialog box to appear.

3 Type a name in the **Printer Name** field.

4 In the **Printer Agent Source** field, select **Public Access Printer**.

5 When the **Select Public Access Printers** list appears, click the **Create** button.

A warning message appears saying that all clients will need to reinstall this printer after it is converted.

6 Click the **OK** button.

7 Select the public-access printer you want to convert to a controlled-access printer and click the **OK** button.

8 Click the **Create** button.

Note
Novell NetWare Client 4.7 for Windows NT displays a transport error when you try to add an NDPS Manager or an Agent using Netware Admin. This problem does not exist with Client 4.6 for Windows NT.

Adding NDPS Printers from Windows Clients

Once an NDPS printer had been created, you can add it to the available printer resources of Windows clients as follows.

To add a printer from a Windows NT 4.x workstation

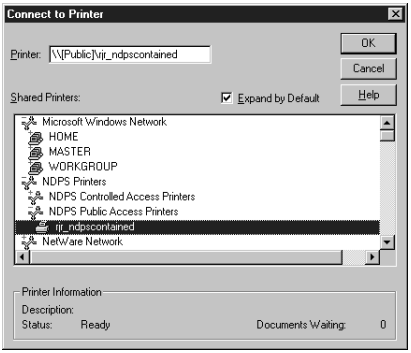
1 Choose **Start** — **Settings** — **Printers**.

2 Double-click **Add Printer**.

3 Select **Network Print Server** and click the **Next** button.

4 Select **NDPS Printers**, find the name of your printer, and click the **OK** button.

- For example:



5 Finish your printer configuration.

8.6 Macintosh configuration

This chapter describes how to configure for network printing in a Macintosh environment.

Setting Up AppleTalk

Use the following procedure to make AppleTalk settings.

1 On the Apple menu, point to **Control Panel** and then select **AppleTalk**.

2 Select **Ethernet**.

3 Close the AppleTalk dialog box.

Selecting and Setting Up the Printer

You must use the following procedure to configure the driver before printing for the first time.

1 Install the PostScript printer driver and the PPD file for the Digital Copier.

- ❍ See the documentation that comes with the Digital Copier for information about how to install it.

2 Select **Chooser** from the Apple menu.

3 Use the field in the upper left of the dialog box to select the appropriate printer driver for your Digital Copier.

4 Use the field in the lower left of the dialog box to select the zone where the Digital Copier is connected.

- ❍ You do not need to select a zone if your network is configured without using zones.

5 In the printer list on the right side of the dialog box, select your Digital Copier. The default name of this Digital Copier is MLT_<serial number>.

6 Click the **Create** button. (If the dialog box on your screen does not have a **Create** button, click the **Setup** button instead.)

7 Close the **Chooser**.

This completes configuration of the network and printer. The printer can now be used for printing from different applications. Note that you do not need to open the **Chooser** and click the **Setup** button again once you complete the above procedure.

Network Card Configuration

The Network Card comes with NIManage for AppleTalk, which is a Macintosh utility program for configuring the Network Card. (Except Mac OS X)

See “NIManage for AppleTalk (Macintosh)” for information about installing NIManage for AppleTalk and using its various features and functions.

8.7 Using the utility software

Management Access Program (Windows)

Management Access Program (MAP) is a Windows utility that automatically detects IP and IPX-based Network Cards on a network and provides a Web browser-based setting and management environment.

MAP automatically detects all the Network Cards on the network and lists them on a Web browser page. Clicking one of the Network Cards listed on the Web browser page accesses the Network Card’s built-in HTTP server. The Web browser can then be used to make Network Card settings.

Requirements

- Computer must have TCP/IP installed and enabled.
- Computer must have IPX/SPX-compatible protocol installed. (Required only when using the IPX search function.)
- Computer must have a Web browser installed.
- Operating system: Windows 95, 98, Me, NT 4.0 or 2000.

Note

See Appendix A - Installing and Setting Up Network Protocol (Windows) and the applicable Windows documentation for information about installing TCP/IP and IPX/SPX under Windows.

Installing MAP

Use the following procedure to install MAP.

1 Load the CD-ROM into the CD-ROM drive of the computer you want to use.

2 Start **Setup.exe** in the **Map** folder on the CD-ROM.

3 Follow the instructions that appear on the screen to complete the installation.

- The default installation directory is **C:\Program Files\Map**. You can change this to any other directory during the installation procedure.

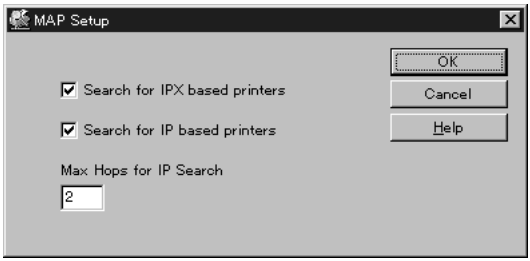
Using MAP

Setting Up MAP

1 On the **Start** menu, point to **Programs** and then **Map**.

2 On the submenu that appears, click **MAP Setup**.

3 Make the settings you want on the dialog box that appears.



Settings

- **Search for IPX based printers**
  Check this option when you want to detect IPX/SPX-based printers.
- **Search for IP based printers**
  Check this option when you want to detect TCP/IP-based printers.
- **Max Hops for IP Search**
  Input a value for the maximum number of hops for the search. The initial default value is 2.

Note

The maximum number of hops value defines the maximum number of subnetworks the program searches for Network Cards. When a value of zero is set here, the search does not include any subnetworks to which the computer is connected. A value of 2 searches all networks that can be accessed through no more than two routers. Specifying a value of 15 or greater automatically detects all connected Network Cards, but such a high setting greatly increases traffic, and so it is not recommended.

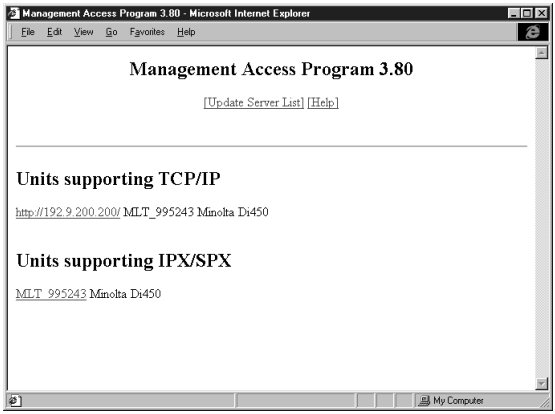
After the settings are the way you want, click the **OK** button to apply them and close the dialog box.

Running MAP

1 On the **Start** menu, point to **Programs** and then **Map**.

2 On the submenu that appears, click **MAP**.

3 A list of Network Cards found by MAP appears on a Web browser page.



4 Click the URL or the serial number of the Network Card whose settings you want to change.

5 This displays a Web page for managing the printer where the Network Card is installed. You can use the Web page to make various Network Card settings. See “10 PageScope Light” for more information.

Note

If you start up the Digital Copier with its initial factory default setup without assigning a Digital Copier IP address, ATIP (Automatic Temporary IP Address) automatically assigns an IP address and subnet mask. You can use IP address assigned by ATIP to detect the Digital Copier with the MAP utility. To change the current IP address and subnet mask setting, first access the Digital Copier's Web setup page from MAP, and then make the changes you want.

BOOTP (Windows)

BOOTP is a Windows utility for assigning IP parameters to a Network Card. When BOOTP is run on a computer, a BOOTP request from a Network Card causes IP parameters that match the MAC address of the Network Card to be assigned to the Network Card.

Requirements

- Computer must have TCP/IP installed and enabled.
- Network Card must be connected to the same subnetwork as the computer running BOOTP.
- Operating system: Windows 95, 98, Me, NT 4.0 or 2000.

Note

See Appendix A - Installing and Setting Up Network Protocol (Windows) and the applicable Windows documentation for information about installing TCP/IP under Windows.

BOOTP does not operate properly on a computer running a DHCP server.

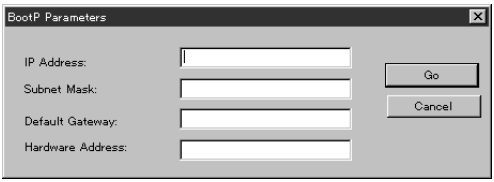
Using BOOTP

1 On the computer you want to use, maneuver to the directory you want and copy **Bootpl32.exe** to it.

- **Bootpl32.exe** is located in the **Bootp** folder on the CD-ROM.

2 Double-click **Bootpl32.exe**.

3 On the BOOTP dialog, select **Configure** from the **Admin** menu.



4 Input the following parameters.

- IP address assigned to the Network Card
- Subnet mask (Must match subnet of connected network.)
- Default gateway (Router IP address of connected network.)
- Network Card MAC address (Recorded on a label on back of the Network Card.)

Note

Use colons to delimit each octet in the MAC address as shown on the Network Card's status page.

5 Reset the Digital Copier by powering it down and then back up again.

The above step outputs a fixed-period BOOTP request.

6 Click the **Go** button on the BOOTP dialog.

7 Wait for about five minutes until the Network Card resets.

8 Select **Verify** from the **Admin** menu. You should get a response that indicates whether or not your unit is active.

- If you get a message stating that the unit is active, you should be able to ping to the Network Card using the steps below.
- If you get a message stating that the unit is not active, check whether TCP/IP is enabled on the status page.

9 Display the MS-DOS prompt and type the following:

```
ping <Network Card IP address>
```

10 Repeat step 8 until a response is received. Configuration is complete when a response starting with the words **Reply from...** is returned.

11 Quit BOOTP.

Note

You cannot use BOOTP to assign an IP address if the Network Card has already been assigned an IP address by ATIP.

NIManage for AppleTalk (Macintosh)

This program lets you change Network Card settings on a Macintosh. It provides the following functions.

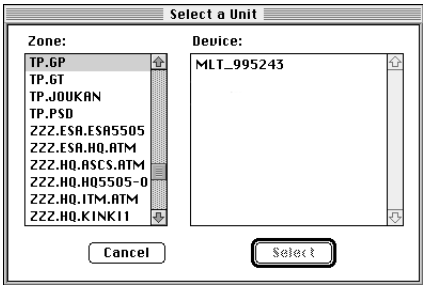
- Modification of printer name and zone name using AppleTalk
- Enabling and disabling of status page output
- Error log referencing
- Enabling and disabling of other protocols, along with display of TCP/IP address, subnet mask, and default gateway address (all of which can be changed)
- Operating System: Macintosh System 7.5.3 to 9.x, except Mac OS X

Using NIManage

1 On the computer you want to use, copy **AppleTalk NIManage Utility Program** to the folder you want.

- **AppleTalk NIManage Utility Program** is located in the **APPLTLK** folder on the CD-ROM.

2 Double-click the **AppleTalk NIManage Utility Program** to start up the program and display the screen shown below.



- **Zone**
  shows the names of the zones on the network.
- **Device**
  shows the Network Cards available in each zone.

Note
The Device display panel is blank if there are no zones on the network.

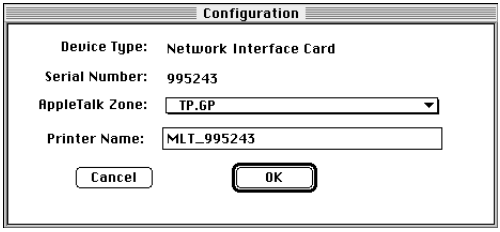
3 On the **Zone** display panel, select a zone name.

4 On the **Device** display panel, select this Network Card.

- Selecting this Network Card on the **Device** display panel enables the **Options** menu bar, which you can use to select various functions. A command is appears dimmed on the **Options** menu when it is not available for some reason.

Configuration

Selecting **Configuration** on the **Option** menu displays a dialog box for changing the Network Card device name and AppleTalk zone.



1 To change the device name, input the new name into the **Printer Name** field.

2 To change the AppleTallk zone, use the **AppleTalk Zone** field pull-down menu to select the zone you want.

...

Note

You cannot change the zone on a network that does not have any zones.

3 After making the settings you want, click the **OK** button.

4 To enable the new settings, power the printer down and then back up again. You can then check the settings on the status sheet.

Error Log

The error log function can be used to reference the event log stored on the Network Card. The error log is referenced whenever a Network Card problem occurs.

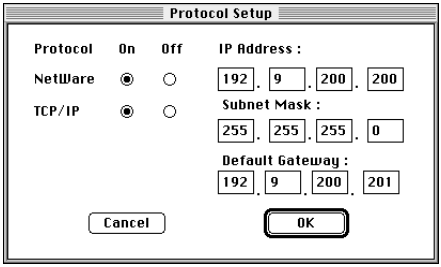
Selecting **Error Log** on the Options menu displays error log contents. You can save the error log as a text file by selecting **Save As** on the **File** menu. You can also print out log contents by selecting **Print** on the **File** menu.

Note

The above procedure is not registered in the error log when it is performed. Powering the Digital Copier down clears log contents.

Setting Up the Protocol

You can use the **Protocol setup** command to configure non-AppleTalk network protocols. On the **Option** menu, select **Protocol setup** to display the dialog box shown below.



You can use the radio buttons on the dialog box to enable and disable protocols. We recommend that you select **off** for protocols that are not used on your network.

After enabling TCP/IP, you can set or change IP parameters. Input the values for your network environment into the **IP Address**, **Subnet Mask**, and **Default Gateway** fields on the dialog box.

Note

Check with your network administrator if you are not sure of the IP parameter settings you should make for your network environment.

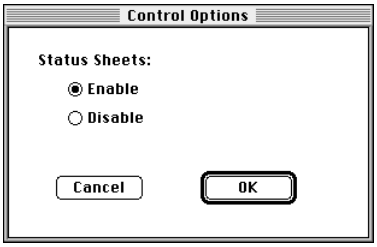
In some cases, the IP parameters all show zeros. This indicates that IP parameters are not set, it does not indicate the current IP parameters.

1 After making the settings you want, click the **OK** button.

2 To enable the new settings, power the Digital Copier down and then back up again. You can then check the settings on the status page.

Setting Up the Status Page

You can enable and disable printing of the status page each time the Digital Copier is powered up. On the **Options** menu, select **Options** to display the dialog box shown below.



Check the **Enable** radio button to enable printing of the status page at power up.

After making the setting, click the **OK** button. The setting you make will be applied from the next time you power up the Digital Copier.

NWSetup (Windows)

NWSetup is a program that simplifies setup of the Network Card in a NetWare environment.

Requirements

- A NetWare server on the network
- IPX/SPX-compatible protocol installed on the computer
- Novel NetWare Client 32 installed on the computer
- Operating system: Windows 95, 98, Me, NT 4.0 or 2000

Note
See Appendix A - Installing and Setting Up Network Protocol (Windows) and the applicable Windows documentation for information about installing IPX/SPX under Windows.

Installing NWSetup

Use the following procedure to install NWSetup.

1. Load the CD-ROM into the CD-ROM drive of the computer you want to use.
2. Start **Setup.exe** in the **Nwsetup** folder on the CD-ROM.
3. Follow the instructions that appear on the screen to complete the installation.
   The default installation directory is **C:\Program Files\Nwsetup.** You can change this to any other directory during the installation procedure.

Using NWSetup

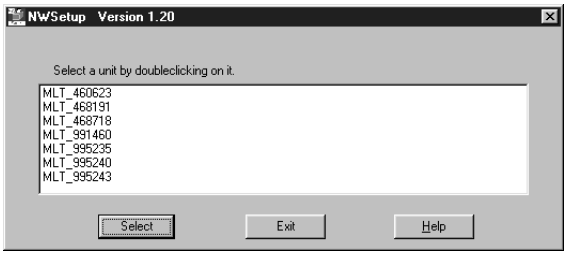
Installation creates a shortcut to NWSetup on the desktop. You can launch the program by double-clicking the shortcut icon.

Note
When setting up NDS (directory server), make sure you are logged in under the correct tree and context before launching the program.

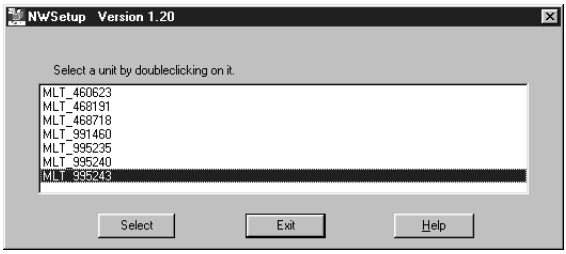
Selecting a Print Server

1 On the **Start** menu, point to **Programs**, and then **Nwsetup**.

2 On the submenu that appears, click **NWSETUP**. This displays a list of all Network Cards available on your network.



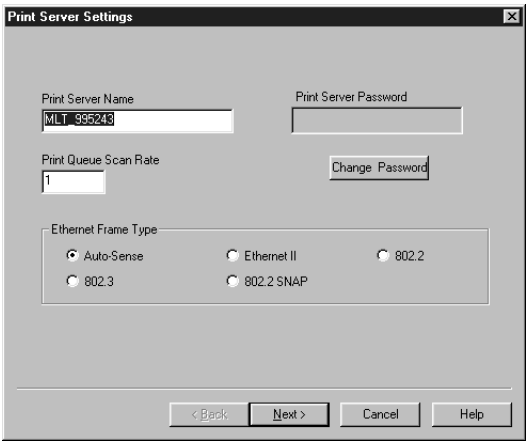
3 Click the serial number of the Network Card you want to configure, and then click **Select** button.



4 The **Print Server Settings** dialog box appears. This screen lets you set up your version of Novell NetWare for the Network Card. See “Novell NetWare Settings” on page 8-40.

Novell NetWare Settings

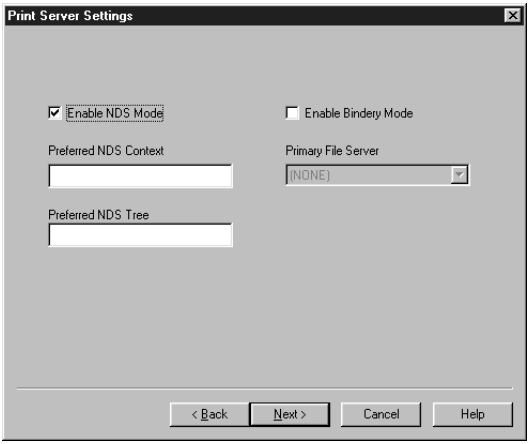
This section explains the contents of the Print Server Settings dialog box. **Print Server Settings** has two screens for setting, and you must input settings for both to configure a Network Card for Novell NetWare. Each screen lets you set up your version of Novell Netware for the Network Card, including directory and bindery services.



- Print Server Name
  Specifies the NetWare print server name. This name is used when the Network Card logs into NetWare. Make sure the name you input is different from anything in the network directory and server bindery. This field accepts input of up to 48 characters.
- Print Queue Scan Rate
  Specifies the rate when the Network Card polls the print queue. Specifying 1 for this field, for example, polls for a new print job once every second. You can specify a value within the range of 1 to 250.
- Print Server Password and Print Server Password Retype
  Specifies the password when the Network Card logs into NetWare. Changing the contents of this field changes the password for both NetWare and the Network Card. This field accepts input of up to 32 characters. This dialog box does not close if the contents of the **Password** and **Password Retype** fields are not identical.

- Ethernet Frame Type
  Specifies the Ethernet frame type used as the default by the NetWare protocol stack. Only one frame type can be selected.

  Clicking the Next button displays the screen show below.



- Enable NDS Mode
  Enables and disables support off directory services by the Network Card.
  - ❍ Checking this option enables directory services support.
  - ❍ Unchecking this option disables directory services support, and causes all other settings on the dialog box to appear dimmed.
- Preferred NDS Context
  Input a character string showing the NDS directory context to be used by the Network Card when logging into the network. This field accepts input of up to 128 characters.

...

Note
Input the entire context, regardless of type.

- Preferred NDS Tree
  Input a character string showing the NDS tree to be used by the Network Card when logging into the network. This field accepts input of up to 48 characters.
- Enable Bindery Mode
  Enables and disables bindery NetWare network services by the Network Card.
  - ❍ Checking this option enables bindery.

Note
Disabling this option also disables the Primary File Server field.

- Primary File Server
  Specifies the NetWare file server used by the Network Card as the primary file server. When no primary file server is selected yet or when the selected server cannot be used for some reason, the first file server on the list is selected automatically.

Print Server Settings

Use the settings on this dialog box to configure a print server printer. This information is normally input using the NetWare **NWADMIN** or the **PCONSOLE** utility. **NWSetup** can also be used to make Network Card printer settings, even though it does not include the above NetWare utilities. The following explains each of the settings.

- Enable Printer
  Enables and disables a Network Card and printer support.
  - Checking this box enables the printer.
  - Unchecking this box disables the printer and causes all other fields on this dialog box to appear dimmed.
- Printer Name Queues Serviced by Printer
  Shows the printer name. You cannot change the content of this field. It lists all the queues serviced by the printer.
  - A bindery connection queue is shown using the syntax: bindery server name: queue name.
  - An NDS connected queue entry includes the distinguished name.

Example:

When the printer services a queue named **YOURPTR_Q** on a bindery server named **OLD_SERVER**, this list shows the entry **OLD_SERVER:YOURPTR_Q**.

When the printer services a queue named **ENGINEERING_Q** on an NDS server with the distinguishing name **ENGINEERING.CORP**, this list shows the entry **ENGINEERING_Q.ENGINEERING.CORP**.

- User/Groups Notified by Printer
  This field lists all of the users and user groups to which notification is sent when a printer error is detected.
  - A bindery connected user or user group is shown using the syntax: bindery server name:user/group name.
  - An NDS connected user or user group entry includes the distinguished name.

Example:

When user Susan is to be notified about errors on a bindery server named **OLD_SERVER**, this list shows the entry **OLD_SERVER:SUSAN**.

When user Albert of NDS context ENGINEERING.CORP is to notified of errors on a printer, this list shows the entry **ALBERT.ENGINEERING.CORP**.

Double clicking an entry in the list displays its Notify Setting dialog box. See “Setting Up Notification” (p. 8-44) for more information.

Note
The Network Card supports notification in bindery mode only.

- Add Queue
  Click this button to display the **Adding a Queue** dialog box, which contains the fields described below.
  - Connection/Server
    Specifies the server connection. This list includes NDS connections associated with the current user, and all bindery file server connections. NDS connections are always listed first by default. Selecting a new connection automatically updates the list.
  - NDS Context
    Specifies the NDS context of the queue. It lists all of the contexts or sub-contexts of the **Queue** field. This field is activated only when NDS support is enabled. By default, **NDS Context** should be set to the often-used NDS connections from among those specified in the **Print Server Settings** dialog box.
  - Queue
    Lists the names of all the queues of the currently selected connections.

    When an NDS connection is specified, the queue names of the selected context and all sub-contexts are displayed.

    Changing the **NDS Context** field context or the **Connection/Server** field connection causes the **Queue** list to change and reflect the new connection or context.

    Double-clicking a listed queue automatically adds the printer’s services to that queue and closes this dialog box.
- Delete Queue
  Selecting a queue and then clicking the **Delete Queue** button displays a dialog box to confirm whether you really want to delete the queue. Click **Yes** to delete or **No** to abort without deleting anything.

Note

Deleting a queue from the list does not physically delete the object from the file server. You must use the NetWare utility to physically delete the queue from the queue list.

- Create Queue
  The following explains the meaning of each field.
  - Queue Name
    Type in the name of the new queue. You must input a queue name here whenever creating a new field. This field accepts input of up to 48 characters.
  - File Server Volume
    Specifies the volume for creation of a queue. This field is enabled only when the current connection is an NDS connection, and lists all available volumes. In the case of a bindery services volume, the default volume name is SYS.
  - NDS Context
    Specifies the NDS context for creation of a queue. This field is enabled only when the current connection is an NDS connection. The initial default for this field is the NDS context specified by the Add Queue dialog box. Changing the contents of this field displays a confirmation message asking whether a check should be performed to determine whether the new context exists in the directory tree. Click the **OK** button to start the check.

Setting Up Notification

The **Notify Settings** dialog box appears whenever you double-click an item listed in the **Users/Groups Notified by Printer** field on the Print Server dialog box. Use this dialog box to define users and groups to receive notifications.

Note

The Network Card supports notification in bindery mode only.

The following explains the fields on this dialog box.

- User/Group name
  Specifies the name of the user or group whose notification settings are being edited. You cannot change the content of this field.

- Delay in minutes for first message
  Specifies the amount of time a print job is delayed, in minutes, after which the Network Cards concludes an error has occurred and sends a notification message. The default value for this setting is 5 minutes, and the setting range is 1 to 60 minutes.
- Delay in minutes for repeat messages
  Specifies the amount of time a print job is delayed a second or subsequent times, in minutes, after which the Network Card concludes an error has occurred and sends a notification message. The default value for this setting is 30 minutes, and the setting range is 1 to 60 minutes.

8.8 Troubleshooting

This chapter explains the Network Card's LED status indicators and tells you what to do when experiencing problems with the Network Card. If the information presented here does not solve your problem, contact your nearest Support Center or Technical Service Representative.

LED Status Indicators

The Network Card has two LED status indicators amber and green in color.

The amber LED shows the progress of normal print jobs. It flashes while the Network Card is sending or receiving data, and goes out when there is no data send or receive operation in progress.

The green LED shows normal Network Card operation, as described in the table below.

LED Operation	*Digital Copier Status*	*Network Card Status*	*Normal/ Abnormal*
Green LED lit	Power on	Self-test in progress	Normal
	Print job standby	Normal operation	Normal
Green LED flashes 3 times, then remains lit	Self-test finished	Prints status page	Normal
Green LED flashes quickly	Self-test in progress	RAM abnormality detected	Abnormal
Green LED flashes 4 times, then pauses	Self-test in progress	Ethernet hardware self-test failed. Check your network.	Abnormal
Amber LED flashes at short interval for 10 seconds. Amber LED goes out, green LED flashes continuously.	Flash memory self-test in progress	Checksum test failed. Automatically enters download mode and waits for flash memory refresh.	Abnormal
Green LED flashes slowly	After power up, goes into print job standby after a short while.	Broken connection between NetWare and file server	Abnormal
Green LED and amber LED flash alternately	Power up sequence complete	Factory initial default reset complete. Power down and move jumper JP2 to OFF position. See "Resetting to Factory Initial Defaults".	Abnormal

Troubleshooting

Check the points described below whenever you experience problems with Network Card operation.

General Troubleshooting Checklist

1 Is the Digital Copier on line?
Check whether the Digital Copier is on line. Nothing can be printed while the Digital Copier is off line.

2 Is the Digital Copier control panel display normal?
See the documentation that comes with the Digital Copier for information about its control panel.

3 Is the Network Card LED status indicator normal?
Check the LED indicators for abnormalities. See “LED Status Indicators” (p. 8-46) for more information.

4 Is the network cable connected securely?
Check to make sure the network cable is securely connected to the 10/100BaseT port. Try changing to another cable to find out if the problem is due to a damaged cable.

5 Are Network Card control settings correct?
Check the protocol that is enabled on for the Network Card. Make sure that the protocol being used by the Network Card is also enabled on the computer.

6 Has there been any change in network configuration?
Check to make sure that settings are correct for any network hardware that has been added, modified or removed.

7 Has there been any change in the computer’s applications?
If you have recently added an application to the computer, check to make sure that the application is not interfering with network settings.

8 Can you print from other applications?
If you can print successfully from other applications, perform the proper troubleshooting procedures for the application with which you are experiencing problems.

9 Can you print from other computers?
If you can print successfully from other printers, perform the proper troubleshooting procedures for the operating system of the computer on which you are experiencing problems.

NetWare Troubleshooting Checklist

Check the following points whenever you are experiencing problems while using NetWare.

1 Is the print server name input correctly?
The default printer name is **MLT_<serial number>**. The serial number is recorded on the Network Card.

2 Is a proper print queue assigned to the printer?
We recommend that you do not assign a print queue that is also assigned to other printers. Doing so can cause a print job to be sent to another printer.

3 Is **Remote Other/Unknown** selected as the printer type?
If **PCONSOLE** settings are correct, the problem may be due to a break in the connection between the Digital Copier and network. Power down the Digital Copier, start up PCONSOLE, and wait until the **Not Connected** message appears. Next, power the Digital Copier back up again. The connection is normal if the displayed message changes to **Waiting for Job**. Otherwise there is a problem with the connection.

4 Is there enough disk space on the file server and is the server operating normally?

5 Is the printer associated with the correct file server?
Use PCONSOLE to check.

6 Do you have the proper privileges for setting up printers?

7 Are the file server and print server communicating normally?
On any computer on the network, run the NetWare **COMCHECK** utility to check for proper communication.

8 Are there sufficient user positions on the file server?
The print server logs on as a user.

9 Is bindery context set up on the file server?
With some versions of NetWare, you must set up the bindery context on the file server even when you are using the NDS Mode.

10 Is the network loaded on the client computer?
See the NetWare documentation for more information.

11 Are client application settings correct?
For example, check to make sure that the correct client driver is being used.

12 Is the computer connected correctly to the print queue?
Print a file and confirm that the job is sent to the print queue. If the job is sent correctly, check for a problem in the connection between the computer and print server.

13 Does a sample print job sent directly from **PCONSOLE** to the assigned queue become active?

14 Are you using the correct version of **PCONSOLE**?
Network Card configuration is impossible with **PCONSOLE** Version 1.0.

15 Is **AUTO ENDCAP** enabled?
Data can be sent to the network using **AUTO ENDCAP**. Use **PRINTCON** to check if **AUTO ENDCAP** is enabled. If it is disabled, enable it.

Note

Whenever the connection between the Network Card and file server is broken for any reason, it takes from about five to ten minutes to re-establish a connection. If a connection is not established within this time, check for errors and correct any problems you discover.

The Network Card cannot print from any other context other than that which is installed. When you want to print from another context, you must create an alias queue. See the related NetWare documentation for more information.

Resetting to Factory Defaults

You can reset the Network Card so all of its parameters return to the initial factory default settings. Be sure to reset the Network Card before moving the Digital Copier to a different network environment (NetWare file server, IP subnet, etc.)

Reset can be performed using a Web browser. For details, see “10 PageScope Light”.

If, for some reason, you cannot access the Network Card using a Web browser, you can reset it using a jumper switch on the Network Card.

8.9 Jumper switch setting

This chapter explains how to change the settings of the Network Card's jumper switch settings.

Normally, the Network Card automatically makes network configuration settings, so you do not need to change jumper switch settings. There may be certain situations, however, where it becomes necessary to change jumper switch settings.

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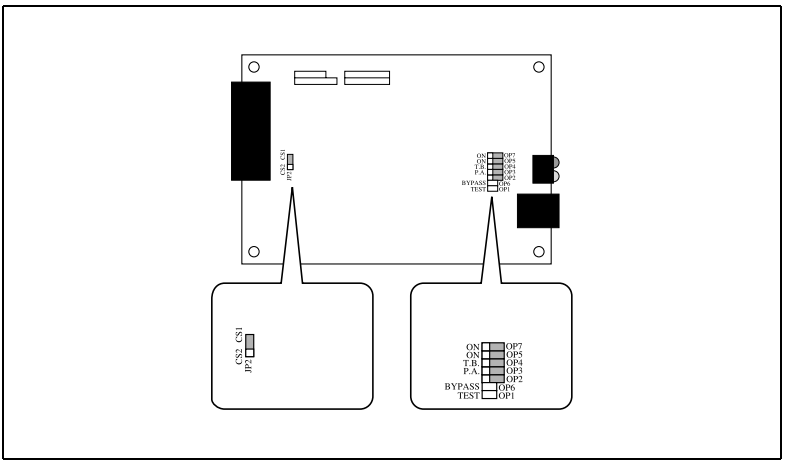
Important!

Special care is required when handling the Network Card. The Network Card is designed to protect components from electrostatic discharge during normal operation. Be sure to take proper electrostatic protection measures whenever handling the Network Card.

Be sure to unplug the Digital Copier from its power outlet before starting work. For full details on handing the Network Card, see the Setup Instructions that comes with the Network Card.

Network Card and Jumper Pin Positions

The illustration below shows the positions of the jumper switches on the Network Card.



* Default pin positions are indicated in gray.

Resetting to Factory Defaults

Jumper switch OP2 can be used to reset all Network Card parameters to their initial factory default settings. The function of OP2 is to reconfigure

NVRAM. Reset the Network Card before moving the printer to another environment or any other time is becomes necessary to reconfigure it to suit another environment.

Network Card Reset Procedure

1 Power down the Digital Copier and unplug it from its power outlet.

2 Disconnect the network cable from the Network Card.

3 Remove the Network Card from the printer by performing the steps in Setup Instructions in reverse.

4 Locate the reset jumper switch (labeled OP2) on the Network Card. See the illustration under “Network Card and Jumper Pin Positions”.

5 Change the OP2 jumper switch to its **FACT** position (OP2 set to pins 1 and 2).

6 Use the procedures in Setup Instructions to re-install the Network Card. Do not connect the network cable to the Digital Copier at this time.

7 Plug in the Digital Copier and power it up.
The Network Card performs a self-test, indicated by the green LED flashing three times, following by the green LED and amber LED flashing alternately. After the green and amber LEDs start to flash, power down the Digital Copier and unplug it from its power outlet.

8 Remove the Network Card from the Digital Copier again.

9 Return the OP2 jumper switch to pins 2 and 3.

10 Use the procedures in Setup Instructions to re-install the Network Card.

Address Selection

Either one of two memory address blocks can be used to access the common memory interface. The two memory address blocks are named **CS1** and **CS2**. The **CS1** space is used when only one card is being used. Use jumper switch **JP2** to select the address space. Setting the jumper switch pin to **1-2** selects **CS2**, while pin setting **2-3** selects **CS1**.

Bus Handshaking

The bus handshake signal can be changed to match the print controller being used. In the case of this Digital Copier, the handshake signal is the WAIT signal (**OP3** pin 2 and 3 setting).

8.10 Specifications

Network Card

Dimensions	123.7 mm (L) × 95 mm (H)
Weight	225 g
Environmental	Temperature: 0 to 50°C Humidity: 5% to 80%
Buttons/Indicators	Green LED, Amber LED (1 each)
Configuration Setup	Onboard non-volatile memory
Connector: Ethernet	RJ45 10/100Base T (8-wire)

10/100BaseT Cable

Be sure to use Category 5 shielded 10/100BaseT cable that conforms with the pinouts shown below.

Pin No.	Color	Ethernet
8	Blue/White	
7	Blue	
6	Orange/White	Receive -
5	Green/White	
4	Green	
3	Orange	Receive +
2	Brown/White	Send -
1	Brown	Send +

9 Scanner Mode

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Note

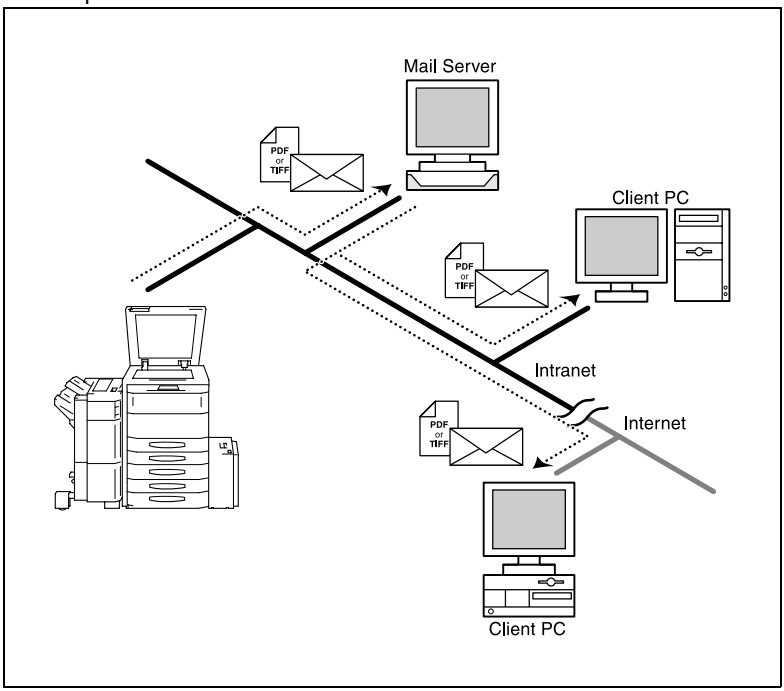
You can search for E-mail addresses registered on the LDAP server. In order to use the scanning function, the optional network interface card must be installed.

9.1 Outline

There are two scan modes you can use with this machine: Use the one appropriate to the network environment and purpose of use.

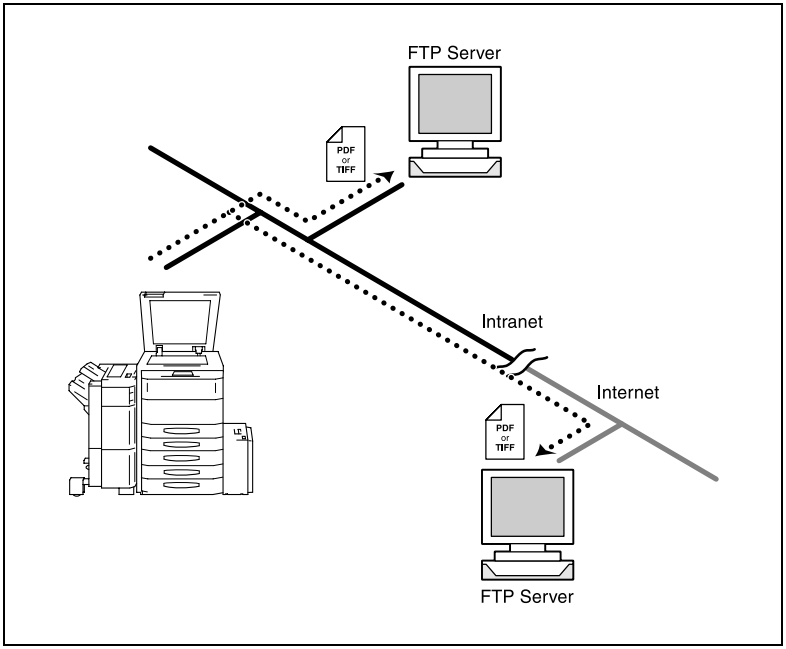
E-Mail (Scan to E-mail)

- Transmits scanned document as attached file with E-mail.
- Suitable for sending low-resolution data.
- Environment of Network with Mail server is necessary.
- Acquires scan data with mail software.



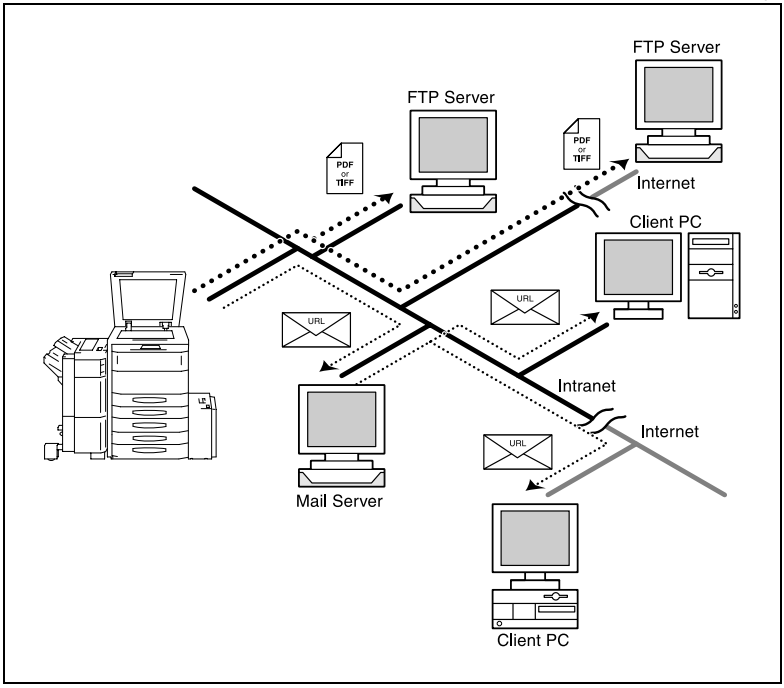
FTP (Scan to Server)

- Transmits scanned document to the specified by FTP server.
- Suitable for sending high-resolution data.
- Environment of Network with FTP server is necessary.
- Acquires scan data with FTP client software.



URL

- Transmits scanned document to the specified by FTP server.
- At the same time, transmits URL of FTP server with E-Mail.
- Suitable for sending high-resolution data.
- Environment of Network with Mail server and FTP server is necessary.



Note

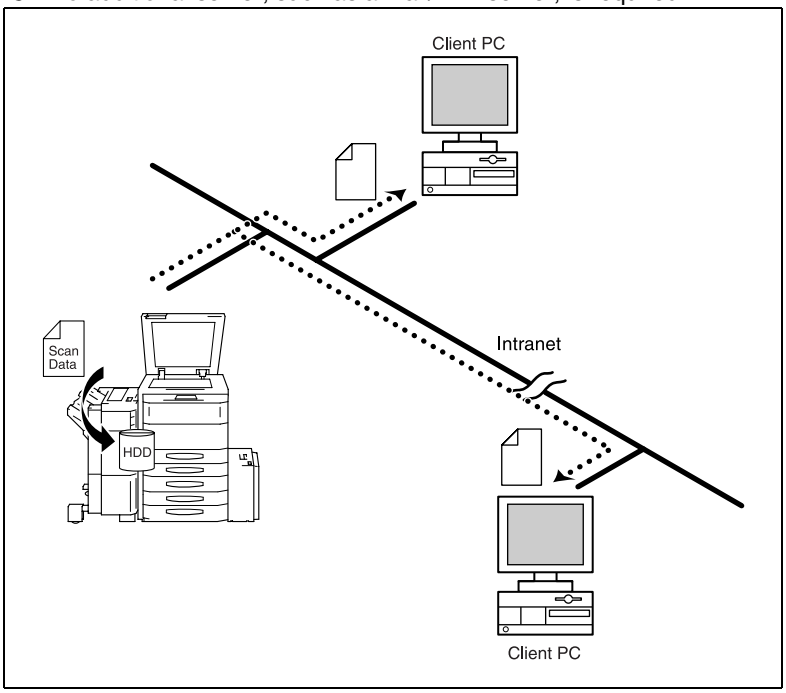
If a key previously programmed with a destination for Scan to E-Mail or Scan to Server is touched at the same time and the scanning is performed, this URL operation is performed.

HDD (Scan to HDD)

Note

In addition to the optional network interface card, the optional hard disk drive is also required.

- Saves scanned data to the hard disk drive of the printer controller.
- Suitable for sending high-resolution data.
- Acquires scan data with TWAIN driver.
- No additional server, such as a mail/FTP server, is required.



Necessary Settings

To use the Scanner Mode, it is necessary to perform the following network settings first.

You use PageScope Light to make these settings. For the details of PageScope Light, see “10 PageScope Light”.

Set Item	E-mail	FTP	HDD
IP Address	❍	❍	❍
Subnet Mask	❍	❍	❍
Default Gateway	△	△	△
SMTP Server Address	❍	–	–
Reply Address	❍	–	–
SMTP Connection Timeout	❍	–	–
Default Compression	❍	–	–
FTP Proxy Server Address	–	△	–
Proxy Port No.	–	△	–
E-mail Destination List	❍	–	–
File Destination List	–	❍	–

* ❍ : Necessary △ : Necessary depending on environment – : Not necessary

Necessary Devices (servers)

Set Item	E-mail	FTP	HDD
Network Interface Card	❍	❍	❍
SMTP Server	❍	–	–
FTP Server	–	❍	–
Hard Disk Drive	–	–	❍

* ❍ : Necessary △ : Necessary depending on environment – : Not necessary

9.2 Network Setting

Accessing to PageScope Light

PageScope Light for Pi4700e can be accessed directly from a Web browser.

1 Start the Web browser.

2 In the URL field, enter the IP address of the printer controller as shown below.
`http://<IP address of printer controller>/`
(Example) When the IP address of the printer controller is 192.9.200.200:
`http://192.9.200.200/`

3 This causes PageScope Light for Pi4700e screen to appear.

Operation

PageScope Light for Pi4700e operation is identical to that for Internet Web pages. Clicking a hot link jumps to the link destination, and the **Back** and **Forward** buttons scroll through pages backwards and forward.

Logging In to the Admin Mode

After you log in to PageScope Light in the Admin Mode, you can change the configuration of the Digital Copier settings.

1 Type the administrator password into the **Admin Password** box. The initial default administrator password is **sysadm**. See “Preference” (p. 10-6) for information about how to change the password.

2 Click the **Log-in** button to log in to the Admin Mode.

3 When you want to log out, click the **Log-out** button.

Note

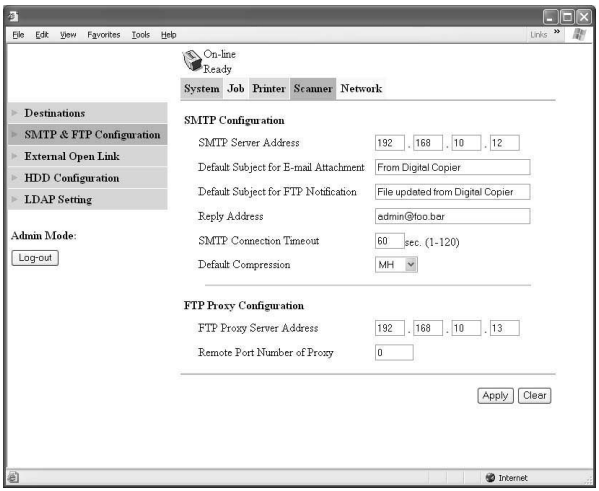
Log out is performed automatically if no operation is performed for more than 10 minutes.

*On the **Network** tab, a password input text box appears on each setting screen. You must be able to input the correct password in order to change **Network** tab settings. The password you should input here is the same as the Admin Password you input on other tabs.*

Contact your network administrator for full details about each of the settings.

SMTP & FTP Configuration

This screen appears when you click **SMTP & FTP Configuration** on the **Scanner** tab. Use this screen to make SMTP and FTP settings.



SMTP Configuration Section

Note

The SMTP Server Address and FTP Proxy Server Address are displayed only when you are logged into the Admin Mode.

Important!

*You must provide information for the **SMTP Server Address** and **Reply Address** when you are using the Send to E-mail function. E-mail cannot be sent if these settings are left blank.*

SMTP Server Address	Type in the IP address of the SMTP server.
Default Subject for E-mail Attachment	Type in the default subject when distributing scanner data as E-mail attachments.
Default Subject for FTP Notification	Type in the default subject when informing by E-mail the URL of the FTP site where scan data is left.
Reply Address	Type in the mail address for a mail replay showing the error message when a send error is generated.
SMTP Connection Time-out	Input the SMTP server connection timeout in seconds. You can input a value from 1 to 120 seconds.
Default Compression	Select the default compression method to be used when distributing scanned data as direct mail.

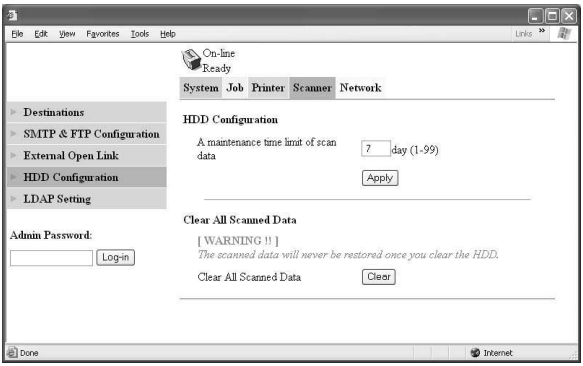
Note

*If you haven't logged on in Admin mode, "***" appears as the IP address in **SMTP Server Address** and **FTP Proxy Server Address**.*

FTP Proxy Configuration Section

FTP Proxy Server Address	Type in the IP address of the FTP proxy server.
Remote Port Number of Proxy	Type in the proxy port number. You can input a value from 1 to 65535.
Apply button	Click this button to apply any settings you have input up to this point.
Clear button	Click this button to cancel any settings you have input up to this point.

HDD Configuration



- A maintenance time limit of scan data

  Specify the length of time that data saved on the printer controller's hard disk drive is kept.

  The default setting is 7 days.

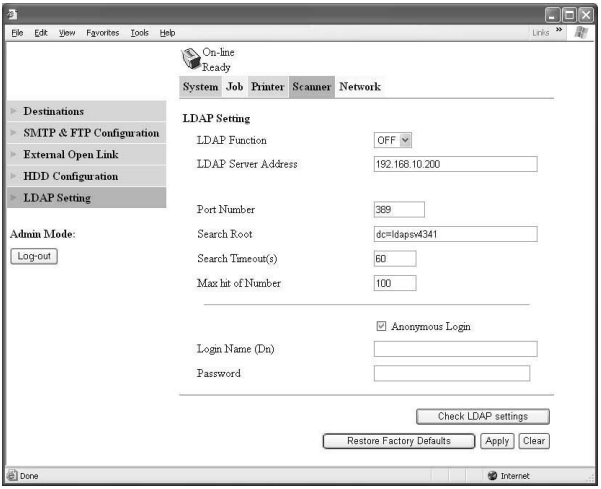
  The printer controller automatically deletes scan data kept for the specified length of time.

- Clear All Scanned Data

  All scan data on the printer controller's hard disk drive can be manually deleted.

  Deleting all of the scan data can only be performed by a user logged on with Administrator privileges.

LDAP Setting



LDAP Function	Use this setting to turn LDAP search on or off. The setting you make here does not go into effect until you turn the copier off and then back on again. The initial default setting is OFF.
LDAP Server Address	Input the LDAP server address. The initial default setting is blank. Only an IP address can be typed in.
Port Number	Enter the LDAP server port number. The initial default setting is 389.
Search Root	Input the search start point. The initial default setting is blank.
Search Timeout(s)	Input a timeout value (seconds) for LDAP communication. The initial default setting is 60 seconds.
Max hit of Number	Input a value that specifies the maximum number of hits that can be accepted for LDAP search results. The initial default setting is 100.
Anonymous Login	Selecting this check box enables configuration of anonymous login settings. If the **Anonymous Login** check box is selected, **Login Name** and **Password** become unavailable.
Login Name(Dn)	Input the user name.
Password	Input the password.
Check LDAP settings	Click this button to check whether the server can be accessed (logged into) using the currently configured settings. If the server is accessed but the settings are incorrect, an error appears. Refer to the “Error List” on page 11-6.

Supported LDAP Servers

LDAP Server		Supported Operating Systems
Microsoft	Exchange 5.5	Windows NT Server 4.0
	Exchange 2000 (on ActiveDirectory)	Windows 2000 Server
Lotus	Domino Server 5.x, 6.x	Windows 2000 Server or Windows NT Server 4.0
Novell	eDirectory 8.6, 8.7 [Groupwise 5.5, 6]	Windows 2000 Server and NetWare(5 or 6)

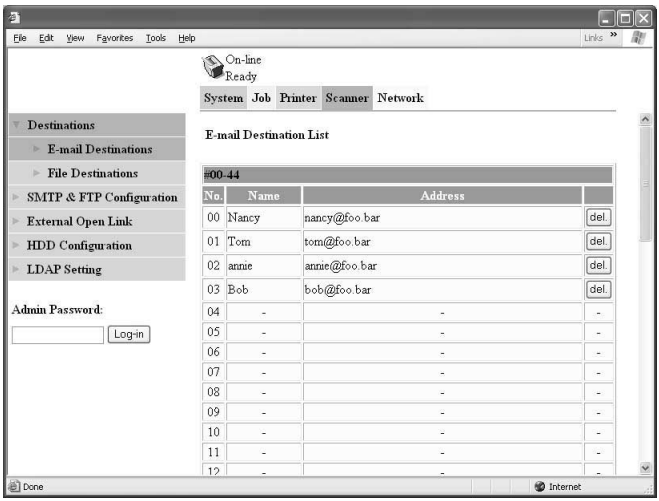
9.3 E-mail Destinations

...

Note

When registering a destination, it must first be entered in PageScope Light, and then registered from the touch panel of the digital copier.

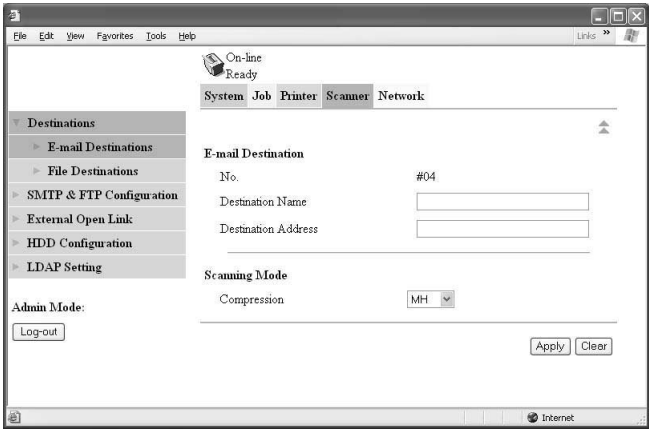
This screen appears when you click the **E-mail Destinations** sub-menu under the **Destination** menu. It lists the E-mail Destinations that are currently registered.



- Clicking an unused cell inside the E-mail Destination List displays a screen for registering a new E-mail Destination. See “Configuring an E-Mail destination” (p. 9-13) for more information.
- Clicking an existing E-mail Destination number or name displays a screen showing the details of that destination. See “Configuring an E-Mail destination” (p. 9-13) for more information.
- To delete an E-mail Destination, click the **del** button next to the destination you want to delete.

Configuring an E-Mail destination

This section describes the settings you can make on the screens for registering a new E-mail destination and for changing the configuration of an E-mail destination.



E-mail Destination Section

No.	E-mail Destination number
Destination Name	Type in the name of the E-mail Destination. You can input up to 72 characters.
Destination Address	Type in the E-mail address of the destination. You can input up to 72 characters.

Scanning Mode Section

Compression	Select the compression method to be used when scanned data is sent as an E-mail attachment.
Apply Button	Click this button to apply any settings you have input up to this point.
Clear Button	Click this button to cancel any settings you have input up to this point.
Icon	Click to return to the previous screen.

Checking/changing registration (PageScope Light)

1 Start PageScope Light.

2 Click **Scanner**.

3 Click **E-mail Destination**.

4 Enter your admin. password, then click **Log-in**.

5 Click the number assigned to the destination to be checked or modified.

Deleting registration (PageScope Light)

1 Start PageScope Light.

2 Click **Scanner**.

3 Click **E-mail Destination**.

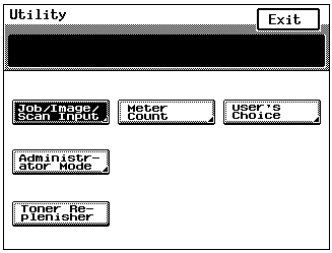
4 Enter your admin. password, then click **Log-in**.

5 Click the **del.** button of the destination to be deleted.

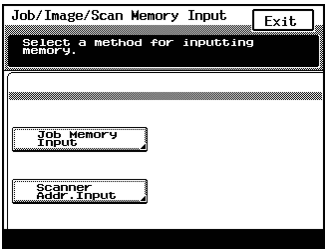
New registration (touch panel of the digital copier)

1 Press the [Utility] Key.

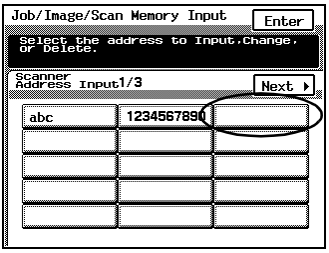
2 Touch [Job/Image/Scan Input].



3 Touch [Scanner Addr. Input].

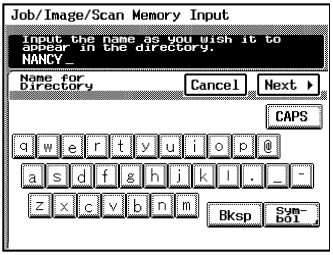


4 Touch the key to be registered.

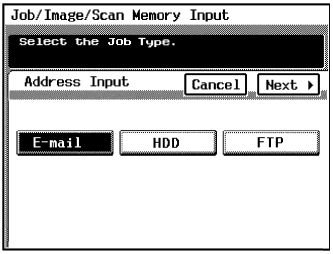


5 Type in the name that will appear on the key (for example, “NANCY”).

Touch [Next].

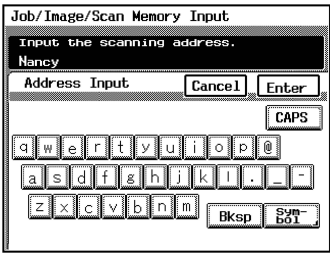


6 Touch [E-mail].



7 Touch [Next].

8 Type in the destination.



Note

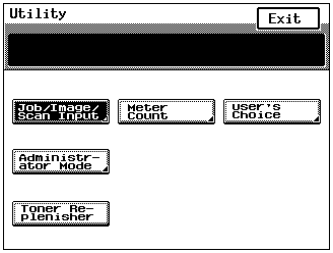
Type in the destination name that was entered when the E-mail destination was specified with PageScope Light. In the screen shown at the right, the name "Nancy" is entered for the example with the E-mail address "nancy@foo.bar" in the screen shown on page 9-12.
Or type in the E-mail address directly without using PageScope Light.

9 Touch [Enter].

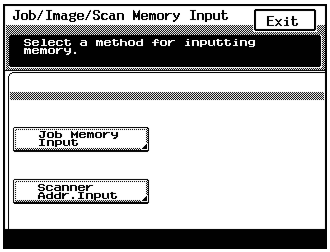
Checking/changing registration (touch panel of the digital copier)

1 Press the [Utility] Key.

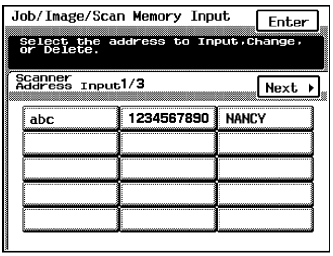
2 Touch [Job/Image/Scan Input].



3 Touch [Scanner Addr. Input].



4 Touch the address to be changed.



5 Confirmation screen will appear. If you touch an item to be changed, you will change the content.

Registering LDAP Search Criteria

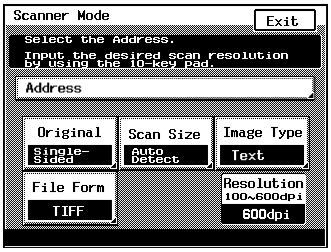
...

Note

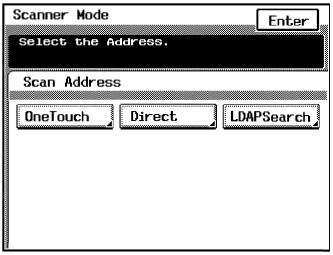
PageScope Light settings must be configured in order to perform an LDAP search.

1 Press the [Scan] Key.

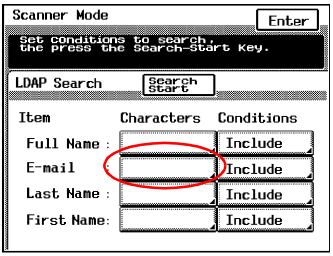
2 Touch [Address].



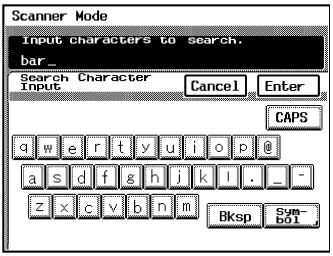
3 Touch [LDAPsearch].



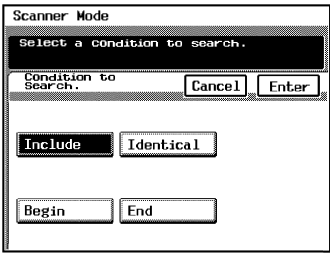
4 Touch the item you want to search for.



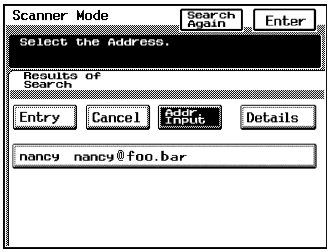
5 Type the search text, and then touch [Enter].



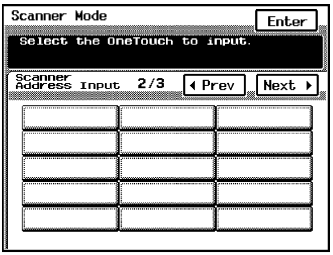
6 Change the search condition as required, touch [Enter], and then touch [LDAPsearch].



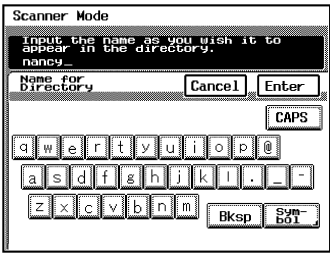
7 Touch [Addr. Input], select the address you want to register.



8 Select the on one touch button where you want to register the criteria.



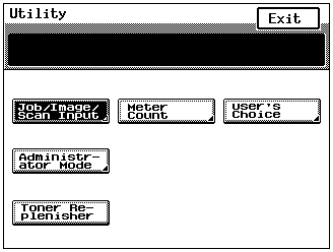
9 Type the criteria name and then touch [Enter].



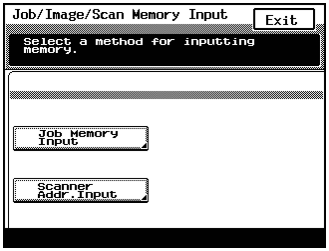
Deleting registration (touch panel of the digital copier)

1 Press the [Utility] Key.

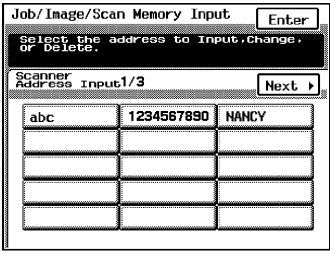
2 Touch [Job/Image/Scan Input].



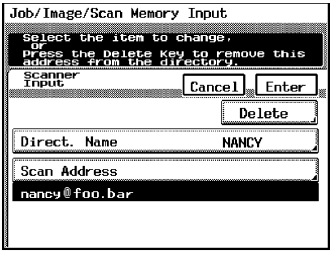
3 Touch [Scanner Addr. Input].



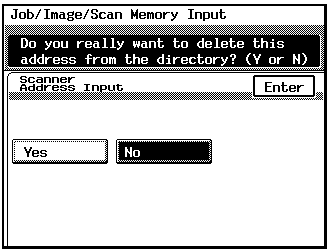
4 Touch the address to be deleted.



5 Touch [Delete].



6 Touch [Yes] and touch [Enter].



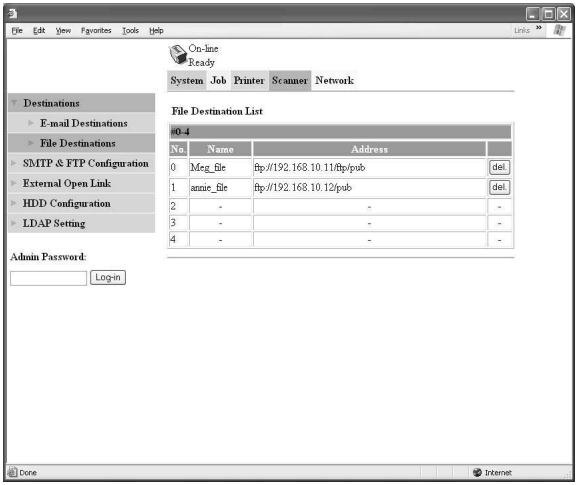
9.4 File destinations

...

Note

When registering a destination, it must first be entered in PageScope Light, and then registered from the touch panel of the digital copier.

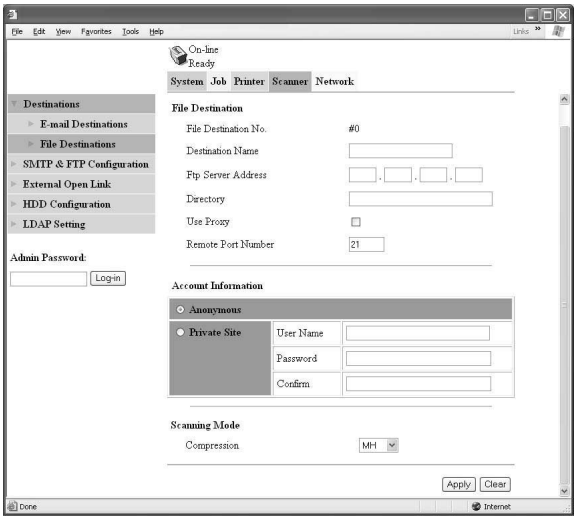
This screen appears when you click the **File Destinations** sub-menu under the **Destination** menu. It lists the File Destinations that are currently registered.



- Clicking an unused cell inside the File Destination List displays a screen for registering a new File Destination. See “Configuring a File Destination” (p. 9-22) for more information.
- Clicking an existing File Destination number or name displays a screen showing the details of that destination. See “Configuring a File Destination” (p. 9-22) for more information.
- To delete an File Destination, click the del button next to the destination you want to delete.

Configuring a File Destination

This section describes the settings you can make on the screens for registering a new file destination and for changing the configuration of a file destination.



File Destination Section

File Destination No.	File Destination number
Destination Name	Type in the name of the File Destination. You can input up to 72 characters.
FTP Server Address	Type in the IP address of the FTP site.
Directory	Type in the directory of the FTP site where the scan data is located. You can input up to 128 characters.
Use Proxy	Put a check mark into this box to enable access of the FTP site via a proxy.
Remote Port Number	When not using a proxy, input the FTP port number. You can input a value from 1 to 65535.

Account Information Section

Anonymous	Select this option to enable log in to the FTP site using an anonymous account.	
Private Site	Make the following settings for non-anonymous account log in on the FTP site.	
	• User Name:	Type in the user name for logging in to the FTP site. You can input up to 64 characters.
	• Password:	Type in the password for logging in to the FTP site. You can input up to 40 characters.
	• Confirm:	Re-input the password to confirm it.

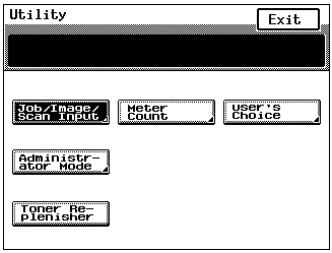
Scanning Mode Section

Compression	Select the compression method to be used when scanned data is send by FTP.
Apply Button	Click this button to apply any settings you have input up to this point.
Clear Button	Click this button to cancel any settings you have input up to this point.
Icon	Click to return to the previous screen.

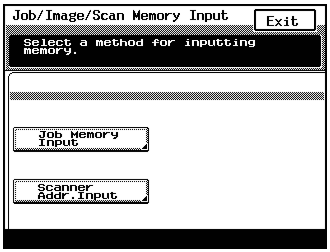
New registration (touch panel of the digital copier)

1 Press the [Utility] Key.

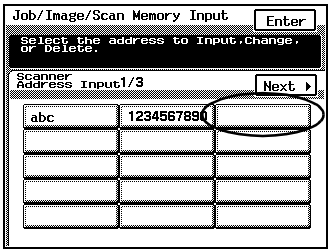
2 Touch [Job/Image/Scan Input].



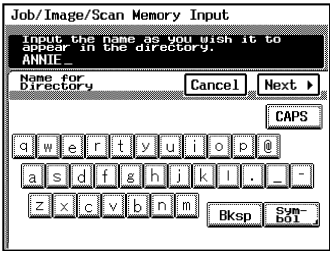
3 Touch [Scanner Addr. Input].



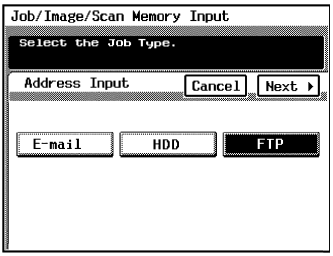
4 Touch the key to be registered.



5 Type in the name that will appear on the key (for example, “ANNIE”).

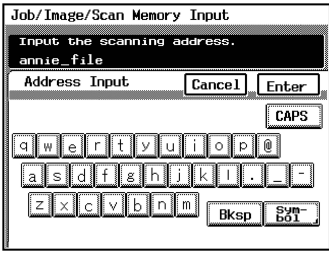


6 Touch [FTP].



7 Touch [Next].

8 Type in the destination.



Note

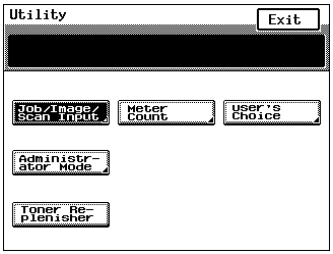
Type in the destination that was entered when the file destination was specified with PageScope Light. In the screen shown at the right, the destination ftp://192.168.10.12/pub is entered for the example with the name "annie_file" in the screen shown on page 9-21.

9 Touch [Enter].

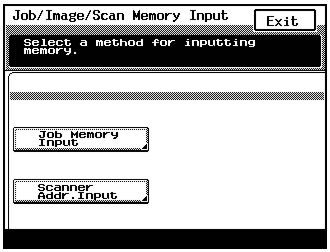
Checking/changing registration (touch panel of the digital copier)

1 Press the [Utility] Key.

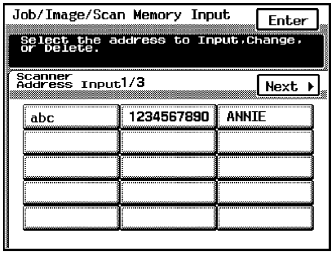
2 Touch [Job/Image/Scan Input].



3 Touch [Scanner Addr. Input].



4 Touch the address to be changed.

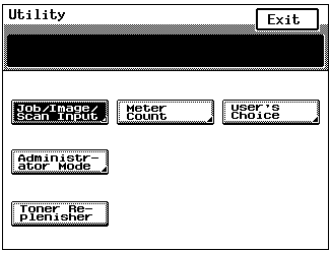


5 Confirmation screen will appear. If you touch an item to be changed, you will changed, you will change the content.

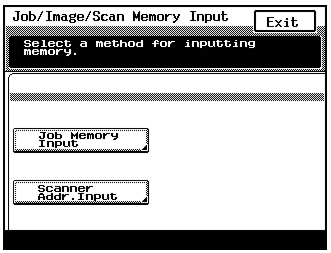
Deleting registration (touch panel of the digital copier)

1 Press the [Utility] Key.

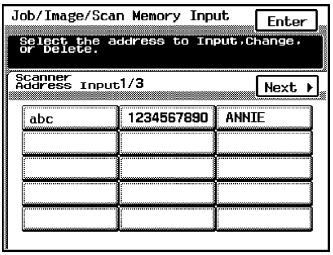
2 Touch [Job/Image/Scan Input].



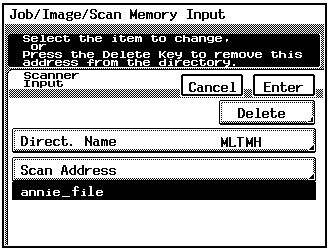
3 Touch [Scanner Addr. Input].



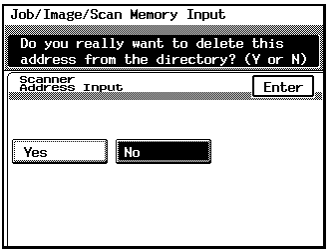
4 Touch the address to be deleted.



5 Touch [Delete].



6 Touch [Yes] and touch [Enter].



9.5 Mailbox Destinations

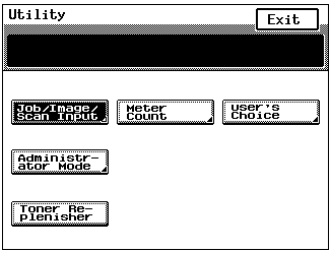
New registration (touch panel of the digital copier)

Note

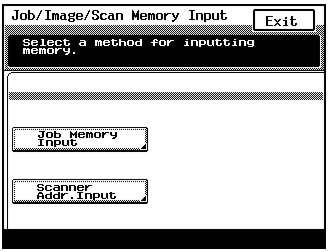
This procedure cannot be performed from PageScope Light.

1 Press the [Utility] Key.

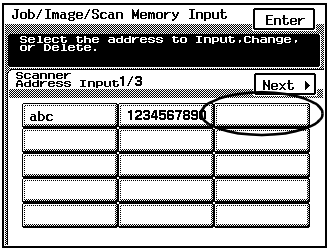
2 Touch [Job/Image/Scan Input].



3 Touch [Scanner Addr. Input].

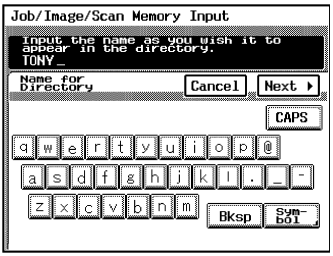


4 Touch the key to be registered.

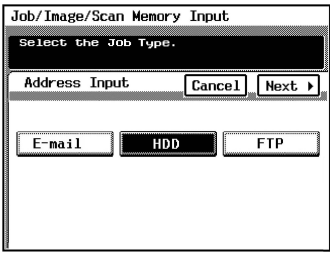


5 Type in the name that will appear on the key (for example, “TONY”).

Touch [Next].

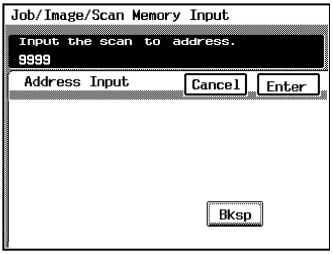


6 Touch [HDD].



7 Touch [Next].

8 Input the scan to address. (0000 ~ 9999)



Note

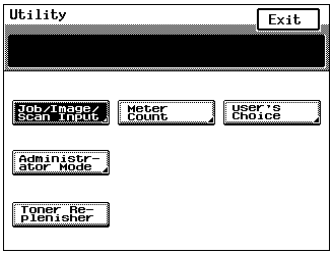
Box numbers entered as “1”, “01”, “001” or “0001” will be treated as the same box.

9 Touch [Enter].

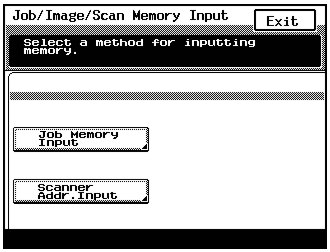
Checking/changing registration (touch panel of the digital copier)

1 Press the [Utility] Key.

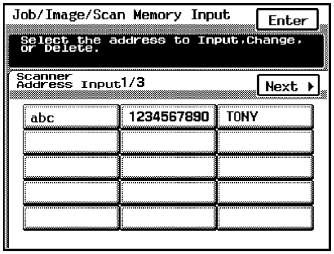
2 Touch [Job/Image/Scan Input].



3 Touch [Scanner Addr. Input].



4 Touch the address to be changed.

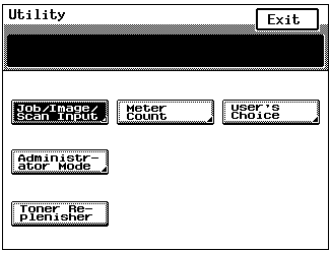


5 Confirmation screen will appear. If you touch an item to be changed, you will changed, you will change the content.

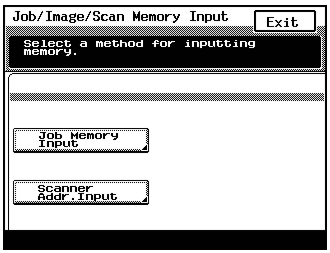
Deleting registration (touch panel of the digital copier)

1 Press the [Utility] Key.

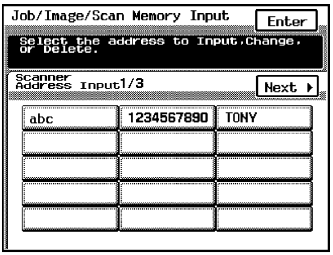
2 Touch [Job/Image/Scan Input].



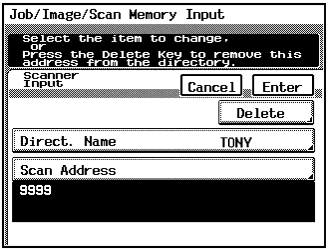
3 Touch [Scanner Addr. Input].



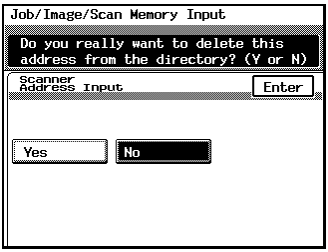
4 Touch the address to be deleted.



5 Touch [Delete].



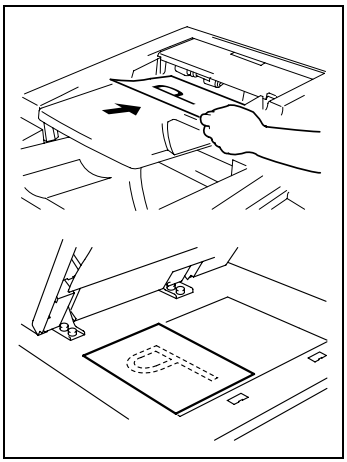
6 Touch [Yes] and touch [Enter].



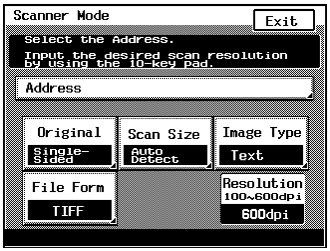
Direct Input

1 Press the [Scan] Key.

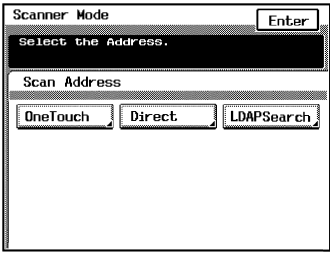
2 Set Original.



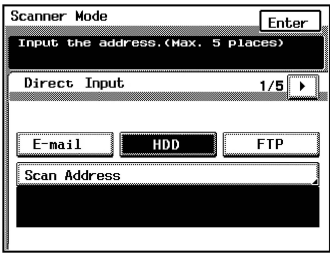
3 Touch [address].



4 Touch [Direct].



5 Select [E-mail], [HDD] or [FTP], touch [Scan Address], and then input the address. Next, press [Enter]. If there are two or more addresses, proceed to the next Direct Input page (2/5) and input the next address.



6 Press the [Start] Key.

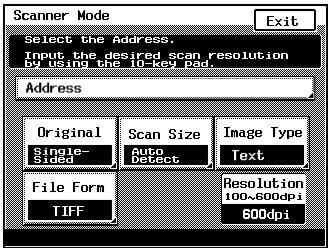
Note

For the destination FTP server address, input the address whose settings you configured with PageScope Light.

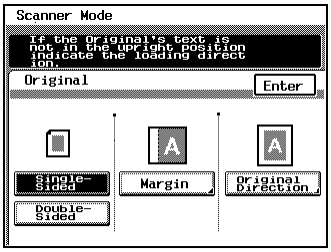
Scanning double-sided original:

Double-sided original can be scanned when Duplexing Document Feeder is attached.

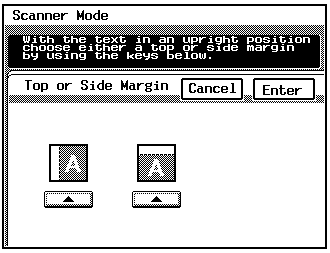
1 Touch [Original].



2 Touch [Double-Sided].

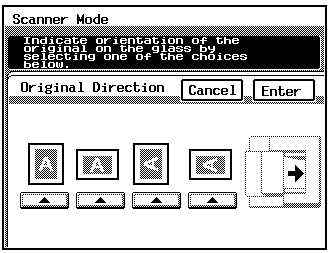


3 Touch [Margin] and select the file margin position of the original.



4 Touch [Enter].

5 Touch [Original Direction] and select the direction of the original.

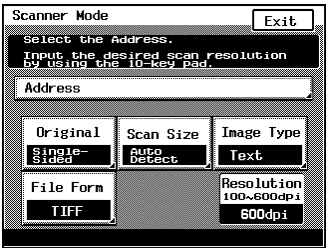


6 Touch [Enter].

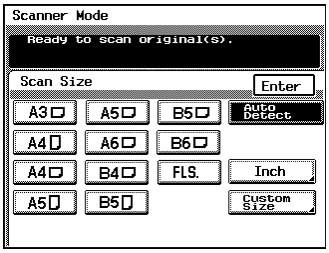
7 Touch [Enter].

Scanning with size specified:

1 Touch [Scan Size].



2 Touch the size to be scanned.

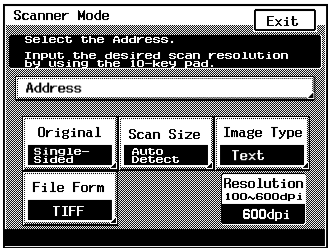


When [Inch] or [Metric] is selected, the corresponding size will be displayed.

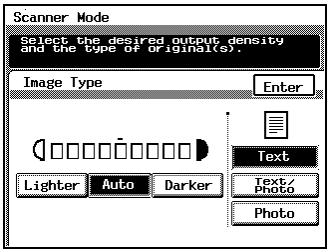
You can also select [Custom Size] to numerically specify the scan size.

Scanning with density changed:

1 Touch [Image Type].



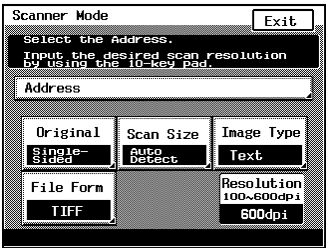
2 Touch [Lighter] or [Darker] to select density.



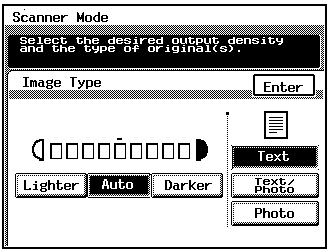
3 Touch [Enter].

Scanning with Image Type changed:

1 Touch [Image Type].



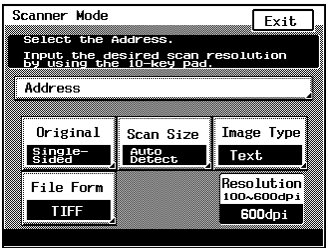
2 Touch [Text], [Text/Photo], or [Photo] to select Image Type.



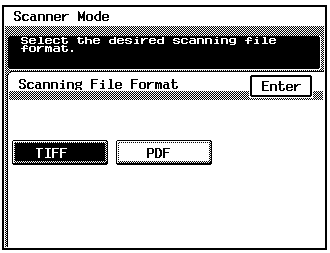
3 Touch [Enter].

Scanning with file format changed:

1 Touch [File Form].



2 Select [TIFF] or [PDF].



Note

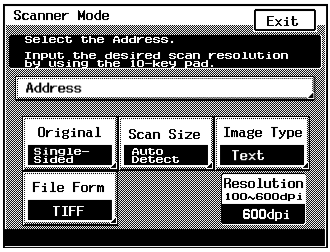
If [HDD] was selected as the recipient, this selection is not available.

3 Touch [Enter].

Scanning with resolution changed:

1 Press the [Clear] Key.

2 Enter the resolution (100 dpi to 600 dpi) from the 10-Key Pad.



The operation of Capturing Images by TWAIN

TWAIN is the interface that allows images captured by a specific device to be input through a computer of a different platform.

To use TWAIN, it is necessary that a TWAIN driver be installed in the PC. The function described in this step is valid only for use in network environment.

Installing the TWAIN Driver

Compatible operating systems: Windows 98/Me/2000/XP

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Note

With Windows 2000 and XP, be sure to log in with administrator privileges.

1 Open the location of the printer driver CD-ROM, in which the TWAIN driver is stored.

2 Execute SETUP.EXE.

Capturing Images by TWAIN

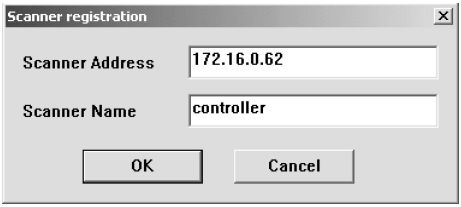
1 Select scan by TWAIN from the application.

2 Click the **Scanner change** button, and then click the **Add** button.

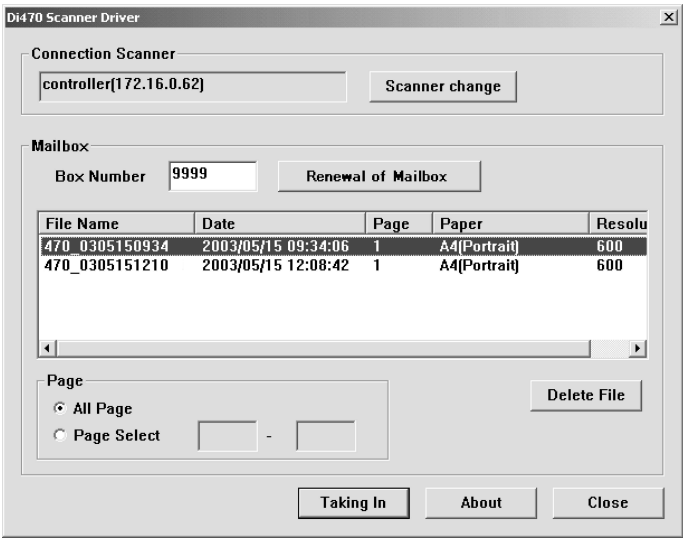
In **Scanner Address**, type the IP address of the printer controller, and then specify an appropriate name in **Scanner Name**.

Note
*The **Scanner Name** box can be left blank.*

Click the **OK** button, and then click the **Connect** button.



3 In **Box Number**, type the four-digit address that was entered when the document was scanned with the digital copier, and then click the **Renewal of Mail box** button.



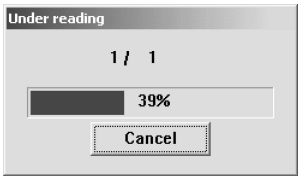
...

Note

Box numbers entered as "1", "01", "001" or "0001" will be treated as the same box.

4 Select the file, and then click the **Taking In** button.

The data is downloaded and the scan data is displayed in the application.

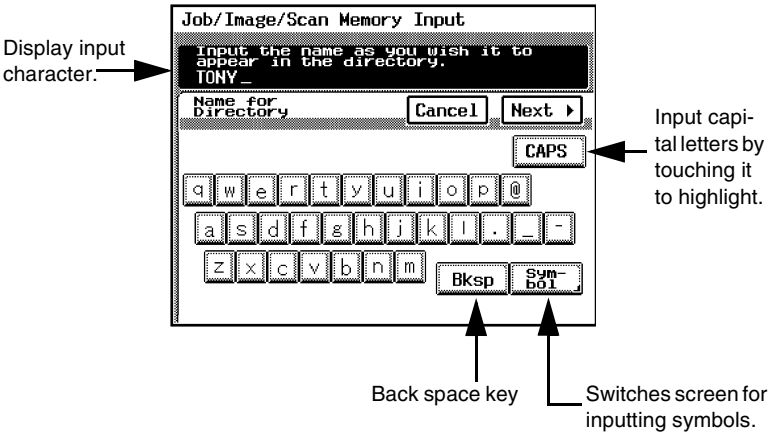


5 The scan image data is automatically deleted after the specified length of time has passed.

To delete the data, select the file, and then click the **Delete File** button.

9.6 How to input characters

Input alphabet letters and symbols by touching keys on screen. Input numerals using numeric keys.



10 PageScope Light

10.1 System requirements

The following items are required to use this utility.

Computer

- Software

Operating System	Web Browser
Windows 95/98/Me/NT 4.0/2000	Internet Explorer 5.0 or higher Netscape Communicator 4.7 or higher
Macintosh System 7 or higher	Internet Explorer 4.5 or higher Netscape Navigator 4 or higher
Solaris 2.5.1/2.6/7 (2.7)	Netscape Navigator 4 or higher
Linux	Netscape Navigator 4 or higher

- NIC (Network Interface Card)
- Ethernet
- TCP/IP Protocol

Digital Copier

Pi4700e Printer Controller

Note

If "Proxy Server" of the Web browser is set to "ON", it may not be possible to access PageScope Light.

10.2 Access

PageScope Light for Pi4700e can be accessed directly from a Web browser.

1 Start the Web browser.

2 In the URL field, enter the IP address of the printer controller as shown below.
`http://<IP address of printer controller>/`

(Example) When the IP address of the printer controller is 192.9.200.200:
`http://192.9.200.200/`

3 This causes PageScope Light for Pi4700e screen to appear.

Operation

PageScope Light for Pi4700e operation is identical to that for Internet Web pages. Clicking a hot link jumps to the link destination, and the **Back** and **Forward** buttons scroll through pages backwards and forward.

Entering the password

After you log in to PageScope Light in the Admin Mode, you can change the configuration of the Digital Copier settings.

1 Type the administrator password into the **Admin Password** box. The initial default administrator password is **sysadm**.

2 Click the [Log-in] button to log in to the Admin Mode.

3 When you want to log out, click the [Log-out] button.

Note
Log out is performed automatically if no operation is performed for more than 10 minutes.

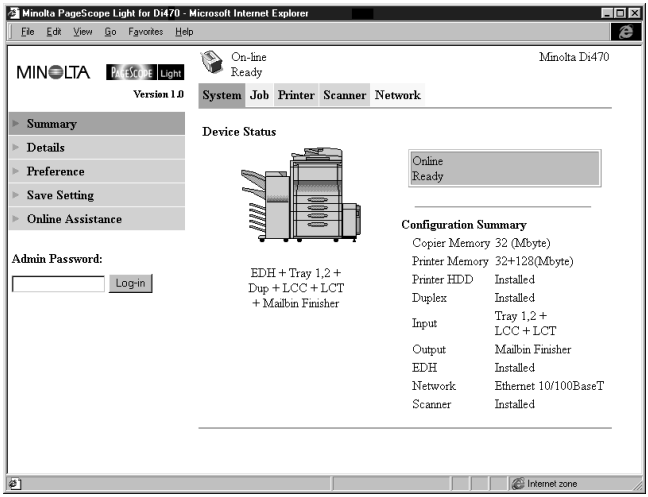
*On the **Network** tab, a password input text box appears on each setting screen. You must be able to input the correct password in order to change **Network** tab settings. The password you should input here is the same as the Admin Password you input on other tabs.*

10.3 Screen configuration

The configuration of the PageScope Light for Pi4700e screen is shown below.

Note

Screen images shown in this manual may differ slightly from actual ones. Also note that specifications are subject to change without prior notice.



Minolta PageScope Light Logo

Clicking the logo jumps to the Website below.

www.minolta.com

Status Display

The current status of the Digital Copier is indicated by both icons and text. The message **Ready** appears when the Digital Copier is operating normally.

Ready	Error	Caution	Fatal

Tabs

Use the tabs to select the category of items you want to display. See the following sections of this document for detailed information about each tab.

Menus

Use the menus to select information or setting items. The menus that appear depend on the currently selected tab.
See the following sections of this document for detailed information about each menu.

Information and Settings Display

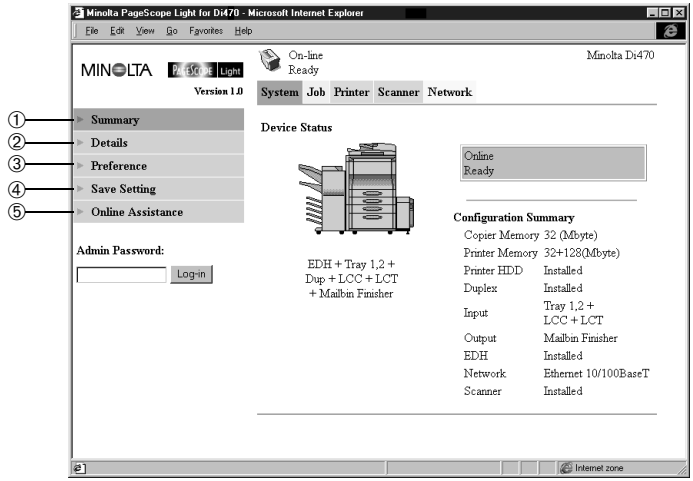
This display shows information or settings in accordance with the selected menu item.

Admin Password

Inputting the admin password provides access to the Admin Mode. See “Entering the password” (p. 10-2) for more information.

10.4 System tab

On the System tab, information concerning the system structure for the Digital Copier can be checked and set, Checking and setting can be performed with the ① Summary, ② Details, ③ Preference, ④ Save Setting and ⑤ Online Assistance menus.



① Summary

A summary of the status and the system structure of the Digital Copier is displayed.

② Details

The details of the status and the system structure of the Digital Copier and displayed.

- **Input Tray**

It shows the current status of all the Input Trays installed on the Digital Copier

- **Output Tray**

In shows the current status of all the Output Trays installed on the Digital Copier

- **Hard Disk**

It shows the status of the hard disk installed on the printer controller. This information is not displayed when there is no hard disk installed on the printer controller.

- **ROM Version**

It shows version of firmware installed on the Digital Copier and printer controller.

- **Interface Info**

It shows information about network interface and local interface.

- **Consumable**

It shows the current status of Digital Copier consumables.

③ Preference

The environment settings such as the refresh rate time and the system language can be specified.

④ Save Setting

This screen appears when you click the **Save Setting** menu on the **System** tab. You can use the screen that appears to save the Digital Copier setup to a file. Note that only settings you can make with PageScope Light are saved to the file. Saved setups can be recalled to set up the Digital Copier when required.

⑤ Online Assistance

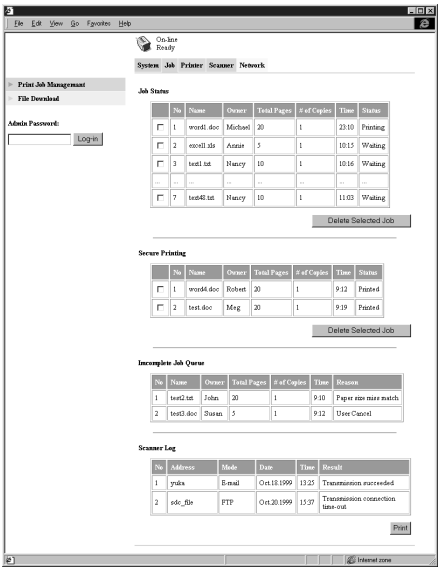
Enter information concerning product support and check it when necessary.

10.5 Job tab

You can use the **Job** tab for managing print jobs sent to the Digital Copier from clients, and for sending files directly from clients for printing.

Print Job Management

This screen appears when you click the **Print Job Management** menu on the **Job** tab. Use this screen to manage print jobs sent from clients to the Digital Copier.



...

Note

A Secure Printing job can only be deleted by the administrator.

File Download

This screen appears when you click the **File Download** menu on the **Job** tab. You can use this screen to send a file directly from a client to the Digital Copier.

10.6 Printer tab

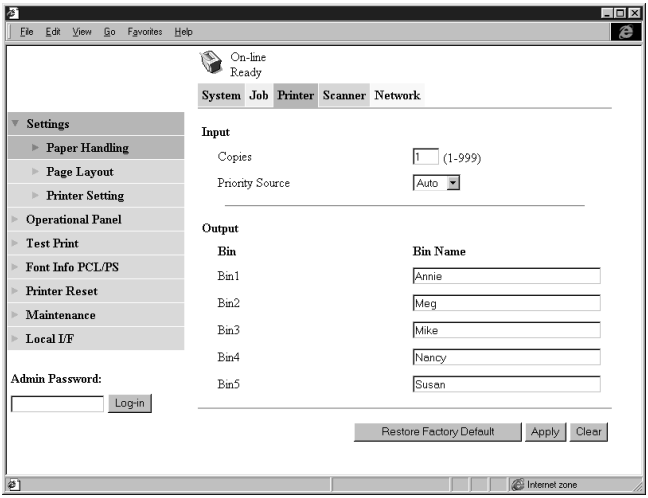
The **Printer** tab shows information and settings for printing on the Digital Copier.

Settings

Sub-menus appear when you click the **Settings** menu on the **Printer** tab. Click the sub-menus to display screens for changing the printer setup.

- **Paper Handling**

This screen appears when you click the **Paper Handling** sub-menu under the **Settings** menu. Use this screen to configure the input tray and output bins.



Input Section

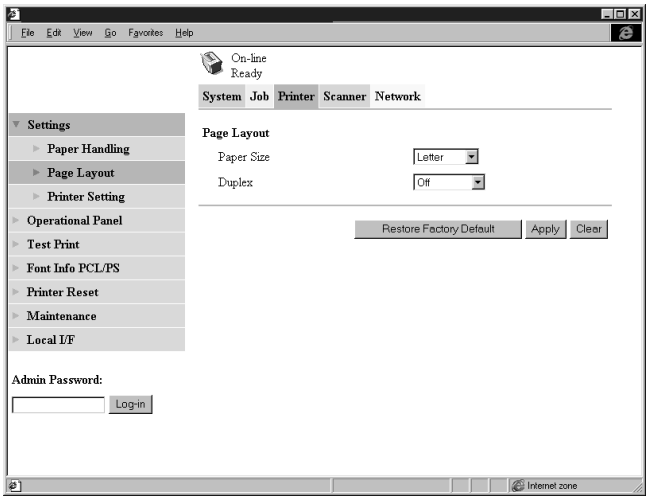
Copies	Input a value indicating the number of copies.
Priority Source	Specify the default input tray. The menu shows only the trays that are currently available for selection.

Output Section

Bin	Bin names when mail bin manager is installed
Bin Name	Type in the name of the user of each bin. You can input up to 32 characters.
Restore Factory Default Button	Click this button to return settings to their initial factory defaults.
Apply Button	Click this button to apply any settings you have input up to this point.
Clear Button	Click this button to cancel any settings you have input up to this point.

- **Page Layout**

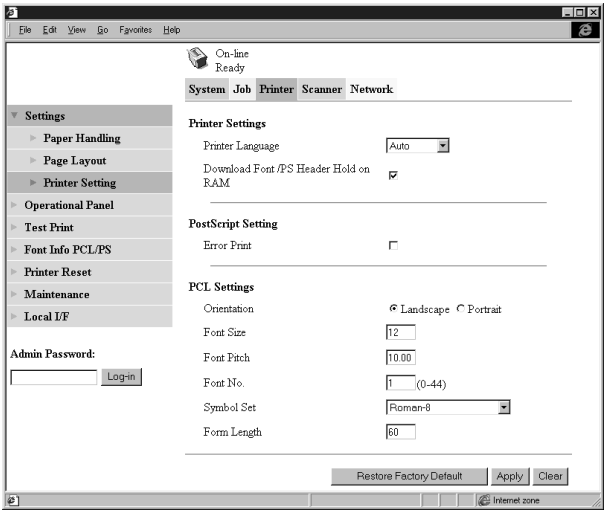
This screen appears when you click the **Page Layout** sub-menu under the **Settings** menu. Use this screen to configure the print document page layout.



Paper Size	Select the page layout paper size to be used when printing is performed without a paper size specified by the client.
Duplex	Use this setting to turn two-side printing on and off, and to specify either long-edge binding or short-edge binding.
Restore Factory Default Button	Click this button to return settings to their initial factory defaults.
Apply Button	Click this button to apply any settings you have input up to this point.
Clear Button	Click this button to cancel any settings you have input up to this point.

● Printer Setting

This screen appears when you click the **Printer Setting** sub-menu under the **Settings** menu. Use this screen to configure the printer controller.



Printer Settings Section

Printer Language	Select the printer control code type.
Download Font/PS Header Hold on RAM	When the box next to this option is checked, downloaded fonts and PostScript header remain in printer controller RAM as long as power is supplied to the printer controller. This option appears after printer controller memory has been increased.

PostScript Settings Section

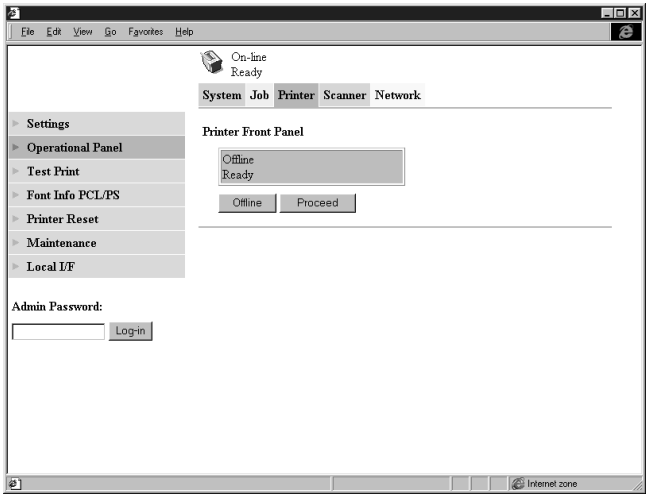
Error Print	When the box next to this option is checked, an error message is printed whenever a PostScript error is generated.

PCL Settings Section

Orientation	Specify the orientation of the printed page.
Font Size	Type in a value specifying the size in points for proportional fonts.
Pitch	Type in a value specifying the number of characters per horizontal inch for uniform space fonts.
Font No.	Type in a font number.
Symbol Set	Select the symbol set you want to use with the font. The default symbol set is used if the symbol set you select is currently not available.
Form Length	Type in a value specifying the number of lines per page.
Restore Factory Default Button	Click this button to return settings to their initial factory defaults.
Apply Button	Click this button to apply any settings you have input up to this point.
Clear Button	Click this button to cancel any settings you have input up to this point.

Printer Front Panel

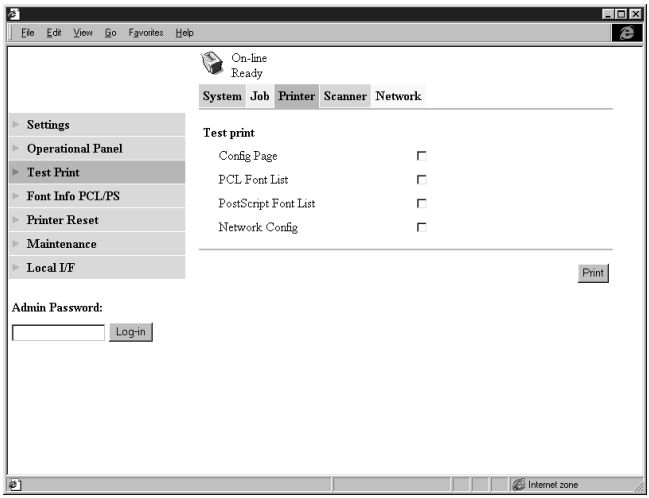
This screen appears when you click the **Operational Panel** menu on the **Printer** tab. It provides on-screen emulation of the printer controller's operational panel.



Display	This area shows the printer controller message display. Messages are the same as the Status Display messages that appear in the upper part of the window.
Online Button	Toggles the printer controller network connection on line and off line
Proceed Button	Click this button to force printing of the job whose data is still in the controller.

Test Print

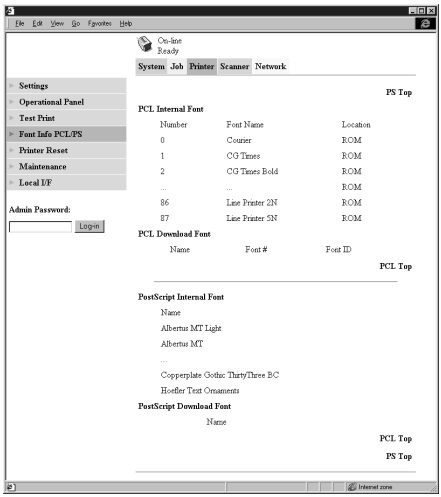
This screen appears when you click the **Test Print** menu on the **Printer** tab. It lets you select a test print page and execute a test print operation.



Config Page	Insert a check mark into the box to print the printer controller set-up page.
PCL Font List	Insert a check mark into the box to print the PCL font list.
PostScript Font List	Insert a check mark into the box to print the PostScript font list.
Network Config	Insert a check mark into the box to print the network configuration.
Print Button	Click this button to execute a test print operation.

Font Information

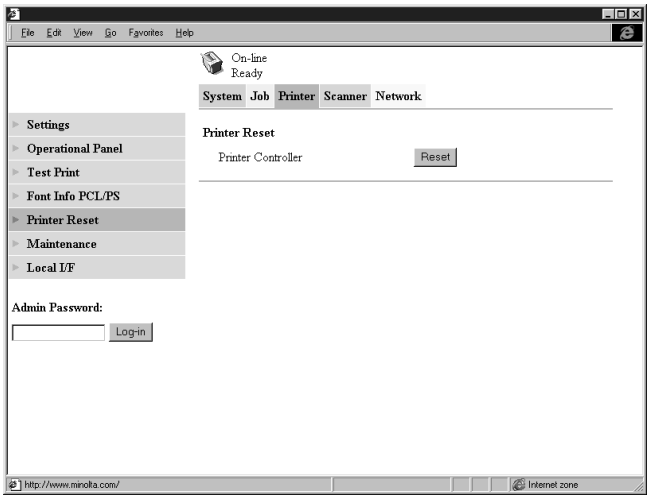
This screen appears when you click the **Font Info** menu on the **Printer** tab. It shows a list of PCL fonts and PostScript fonts built into the printer controller.



PCL Internal Font	PCL fonts built into the printer controller
PCL Download Font	PCL fonts downloaded from the computer to the printer controller
PostScript Font	PostScript fonts built into the printer controller
PostScript Download Font	PostScript fonts downloaded from the computer to the printer controller
Font Name	Font name
Font ID	Unique control number for each downloaded font
Font #	Downloaded font number
Location	Storage location of the font (ROM, RAM, HDD)

Printer Reset

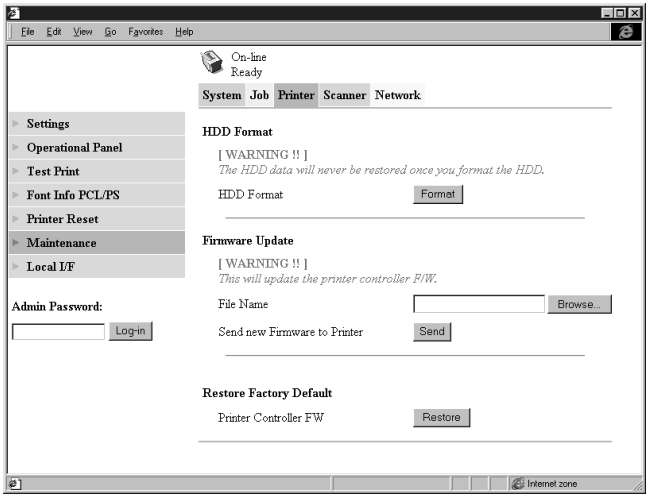
This screen appears when you click the **Printer Reset** menu on the **Printer** tab. Use this screen to reset the printer controller.



Printer Controller — Clicking the **Reset** button displays a confirmation message asking if you want to perform the reset. Click **Yes** to reset the printer controller. Applicable users are informed if a reset is executed while a print operation or data receive operation is in progress.

Maintenance

This screen appears when you click the **Maintenance** menu on the **Printer** tab. Use this screen to format the hard disk drive and to update the printer controller firmware.



HDD Format Section

HDD Format	Use this section to format the hard disk drive. Clicking the **Format** button displays a confirmation screen. Click **Yes** to format the hard disk.

Firmware Update Section

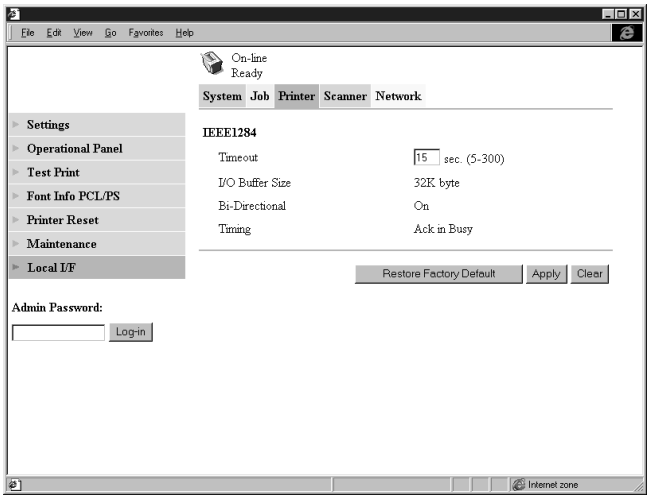
File Name	Type in the full path to the firmware definition file you want to download to the printer controller. You can also click the **Browse** button to display a dialog box for selecting the file.
Send new Firmware to Printer	Click the **Send** button to download the firmware to the printer controller.

Restore Factory Default Section

Printer Controller FW	Use this section to return printer controller settings to their initial factory defaults. Clicking the **Restore** button displays a confirmation screen. Click the Yes button to restore the initial factory default settings.

Local Interface

This screen appears when you click the **Local I/F** menu on the **Printer** tab. Use this screen to view and configure local interface information.



Timeout	Input a value specifying how much time, in seconds, should be allowed to pass after data is received through the parallel port before it is decided that a job is finished.
I/O Buffer Size	I/O buffer size
Bi-Directional	Bi-directional communication setting
Timing	Printer data read timing

10.7 Scanner tab

The Scanner tab contains settings for configuration of the Digital Copier scanner function. For details about the scanner function, see the “9 Scanner Mode” section.

10.8 Network tab

The Network tab contains settings for configuration of the Digital Copier Network function. For details about the network function, see the “Printer Driver” section (p. 3-23).

11 Troubleshooting

11.1 Unable to Print

This section explains about the troubleshooting procedures for possible malfunctions. Perform the troubleshooting procedures given below in that order when the machine is unable to print even if you execute a print command from your computer.

Symptom	*Possible Cause*	*Action*
A message appears on the computer screen, saying something to the effect that “no printer is connected”, “no paper is loaded.” or “LPT1 write error”.	An error is present in the machine.	Check the control panel of the machine: If an error is displayed, identify the error and take the necessary action by referring to the “Error List” on page 11-6.
	The printer cable or network cable is disconnected.	Check that the printer cable or network cable is connected properly to the computer and controller.
Printing does not start despite the completion of printing setup on the computer.	An error is present in the machine.	Check the control panel of the machine: If an error is displayed, identify the error and take the necessary action by referring to the “Error List” on page 11-6.
	The printer cable or network cable is disconnected.	Check that the printer cable or network cable is connected properly to the computer and controller.
	The printer driver selected for printing is not for the Pi4700e.	Check the printer name.
	A print job yet to be processed is loaded in the machine, causing the printer to wait.	Refer to the Job List on the machine control panel to check for print order.
	(for Linux) File to be printed is not a PS file.	Delete job and check to see if it is PS file.

Symptom	*Possible Cause*	*Action*
Continued from the previous page (Printing does not start despite the completion of printing setup on the computer.)	The print job is locked.	Refer to the Job List on the machine control panel to see if the print job in question is locked. If so, unlock it.
	The connection of the controller to the network has not been established.	Consult the network administrator.
	The print job was canceled.	Check the status on the “Incompleted Job Queue” of “Page Scope Light”.
	Machine memory space available is not sufficient.	Add the machine memory to expand its space.
	If the copy track function is enabled, an illegal access number might have been entered.	Enter the correct access number.
Multiple copy sets are mistakenly sorted and stapled together as a single large set.	The settings in certain DTP software applications may conflict with the printer driver settings.	In the application, turn OFF Collate and set the copy count to one. In the printer driver, make the desired Collate, Sorting and copy count settings.
A large number of copies are mistakenly printed.	The settings in certain DTP software applications may conflict with the printer driver settings.	In the application, turn OFF Collate and set the copy count to one. In the printer driver, make the desired Collate, Sorting and copy count settings.
A document containing more than 40 pages cannot be printed.	The maximum number of document pages that can be stored in the standard memory is 40.	• Decrease the number of document pages or add memory to expand its capacity. • Select “Printer” for “Priority Device” available in 6/6 of User’s Choice on the machine.
A PS error print is output.	Some applications allow you to select either “Binary” or “ASCII” mode when the PS driver is being used. A PS error could result if an attempt is made to print in the “Binary” mode.	Select the “ASCII” mode.

If the problem persists even after these checks have been made, refer to the documentation provided for the machine.

Unable to Make Correct Settings / Unable to Print Exactly as Set

Perform the troubleshooting procedures given below in the order when you cannot make proper settings in the printer driver or when the print results do not represent what has been set.

Symptom	*Possible Cause*	*Action*
The options are dimmed on the computer screen.	An illegal combination of functions has been made.	Reselect functions.
		(for Linux) Certain items can be set only by root user in “Device Options Setting”.
The “Conflicts” dialog box is displayed on the computer screen.	An illegal combination of functions has been made.	Check for combination and make a correct combination of functions.
Unable to print exactly as set.	Incorrect settings are made.	Check the setting for each item of the printer driver.
	The combination of the functions, though valid on the printer driver, is invalid on the machine.	
The watermark cannot be printed.	The watermark is not correctly set.	Check the watermark setting.
	The “Darkness” setting of the watermark is low.	Check the “Darkness” setting of the watermark.
Unable to specify Staple.	(for Windows, Linux) Staple can be specified only when the type of Finisher you are using is selected on the “Device Options Setting” tab and “Auto” is selected for “Output Setting” on the “Setup” tab.	Select the type of Finisher you are using on the “Device Options Setting” tab, and select “Auto” for “Output Setting” on the “Setup” tab.
	(for Macintosh) Staple can be specified only when the type of Finisher you are using is selected on the “Installable Options” property sheet and “Auto” is selected for “Output Setting” on the “Printer Specific Options” property sheet.	Select the type of Finisher you are using on the “Installable Options” property sheet, and select “Auto” for “Output Setting” on the “Printer Specific Options” property sheet.
	No stapling can be effected in the following case: Paper size other than 182 × 182 mm to 297 × 432 mm is specified, paper source is manual feed port, exit port other than Auto is selected, Booklet is specified, OHP Interleaving is specified, Uncollated is specified.	Check the setting of the paper size, paper source, exit port, Booklet, OHP Interleaving, and Collated.

Symptom	*Possible Cause*	*Action*
Unable to staple properly.	No stapling can be effected if the type of paper is thick paper or OHP transparencies.	Check the type of paper.
	When Mailbin Finisher or Multi-staple Finisher is installed, no stapling can be effected if number of prints to be made exceeds 50.	Check the number of prints to be made.
	When Single-staple Finisher is installed, no stapling can be effected if number of prints to be made exceeds 30.	
	No stapling can be effected if the number of pages to be printed is 50 or more when a Folding Finisher is mounted. Center Staple is also disabled if the number of pages to be printed is 15 or more.	
	No stapling can be effected if original document contains pages of different sizes.	
The stapling position is opposite to what is expected.	The paper direction and N-up do not match the setting made for Orientation.	Change the setting for Orientation.
Unable to specify Punch.	Either a Multi-staple Finisher, Mailbin Finisher or Folding Finisher must be mounted to enable the setting of Punch, and “Multi-staple Finisher”, “Mailbin Finisher” or “Folding Finisher” must be selected from “Installable Options” to specify Punch.	Select “Multi-staple Finisher” “Mailbin Finisher” or “Folding Finisher” from “Installable Options.”
	Punch cannot be specified if Booklet or OHP interleaving is specified.	Check the setting of Booklet and OHP Interleaving.
Unable to effect Punch.	No holes can be made if the type of paper is thick paper or OHP transparencies.	Check the type of paper.
	Prints can at times be fed out without being punched if the direction of the paper loaded in the paper source is not appropriate.	Check the direction of the paper.
The hole punch position is opposite to what is expected.	The paper direction and N-up do not match the setting made for Orientation.	Change the setting for Orientation.

Symptom	*Possible Cause*	*Action*
Folding cannot be specified.	(for Windows) The optional Folding Finisher is necessary for you to specify Folding. “Folding Finisher” must be selected on “Device Options Setting” tab.	Select “Folding Finisher” on “Device Options Setting” tab.
	(for Macintosh) The optional Folding Finisher is necessary for you to specify Folding. “Folding Finisher” must be selected on “Installable Options.”	Select “Folding Finisher” on “Installable Options.”
	Folding may be disabled when Staple or Punch is specified.	Check the settings made. (See “Function combination matrix” (p. 12-1, p. 12-4, p. 12-7).)
Folding is not effected.	Folding cannot be effected if the type of paper is Thick Paper or OHP.	Check the type of paper.
Unable to print image properly.	Machine memory space available is not sufficient.	Add machine memory to expand its space, or simplify the image to reduce the amount of data handled.
Unable to specify the exit port.	No exit port can be specified if the paper size is A6 or B6, or OHP Interleaving is specified.	Check the setting of the paper size and OHP Interleaving.
Unable to properly feed prints out to the specified port.	Prints with paper size of B6 or smaller cannot be fed out if paper exit port is Mailbin.	Check the paper type and paper size.
Paper is not fed from the specified paper source.	Paper may not be fed from the specified paper source if that paper source is loaded with paper of a different size and direction.	Load the paper source with paper of the appropriate size and in the appropriate direction.
Watermark is not printed.	Watermark may not be printed in graphics applications.	No watermark can be printed in this case.
Unable to print exactly as set.	The paper size, paper direction, and other settings made on the application takes precedence over those made in the driver.	Make the correct settings on the application.
Error dialog box is output instead of Setting dialog box.	Unusable combination of device and settings with Easy Set being stored could have been achieved by changing of device installed.	Open file specified in the error dialog box, delete applicable settings.
Distribution cannot be specified.	To specify Distribution, a “Hard Disk Drive in Copier” that is optional on the machine is necessary. “Hard Disk Drive in Copier” must be specified in “Device Options Setting.”	Select “Hard Disk Drive in Copier” on “Device Options Setting.”

Poor Print Quality

Perform these troubleshooting procedures when you get poor print quality.

Symptom	*Possible Cause*	*Action*
Shades of gray are not clear.	Halftone setting is improperly set.	Check the setting made in "Halftone" in the "Quality" property sheet.

If the problem persists even after these checks have been made, refer to the documentation provided for the machine.

Error List

When an error occurs, the machine control panel gives the message of "Controller failure → 18xx or 19xx."

The table below lists the meanings of different error codes, together with the appropriate remedial procedures. Should an error occur, identify the detail of the error and take the necessary action.

Code	*Description*	*Action*
18A0	NVRAM error Issued when a fault is found in the condition of the setting values saved in the NVRAM of the controller.	Turn OFF the power, then turn it ON. If error persists, consult your Tech. Rep.
18A1	NIC initialization error	
18A3	Version error	
18A7	ROM update data load failure	
18A8	ROM update data write failure	
18F1	Machine communications error	
18F2	Controller fatal error	
18D0	Hard disk being formatted	This error is eliminated as soon as formatting is completed.
18D1	Hard disk format error	Execute formatting from PageScopeLight again. If error persists, consult your Tech. Rep.
18B8	Scan job canceled for short of machine memory space	Recovers 10 minutes later, or when next scan job starts. If error persists, consult your Tech. Rep.
18C0	Memory short during image conversion	
18C1	Scan job NIC processing error	

Code	Description	Action
18C2	Scan job controller processing error	Recovers 10 minutes later, or when next scan job starts. If error persists, consult your Tech. Rep.
18A4	ROM update data loading	Recovers as time passes, or by conducting job.
18A5	ROM update data writing	
18A6	ROM update data completed	
18CC	LDAP server connection refused	These codes should cancel after 10 minutes or with the start of the next scan job. If the error does not cancel normally, contact the LDAP server administrator.
18CD	LDAP server connection terminated	

This manual contains the specifications for the controller. Refer to the documentation provided for the machine for the machine specifications.

A 19xx code appears only during an LDAP search.

Code	Description
1901	operationsError
1902	protocolError
1903	timeLimitExceeded
1904	sizeLimitExceeded
1907	authMethodNotSupported
1908	strongAuthRequired
1909	(reserved)
190A	referral
190B	adminLimitExceeded
190C	unavailableCriticalExtension
190D	confidentialityRequired
190E	saslBindInProgress
190F	(reserved)
1910	noSuchAttribute
1911	undefinedAttributeType
1912	inappropriateMatching
1913	constraintViolation
1914	attributeOrValueExists
1915	invalidAttributeSyntax
1916-1919	(reserved)
1920	noSuchObject (No searchable object)

Code	*Description*
1921	aliasProblem
1922	InvalidDNSyntax
1923	(reserved)
1924	aliasDereferencingProblem
1925-192F	(reserved)
1930	inappropriateAuthentication
1931	invalidCredentials (Wrong password)
1932	insufficientAccessRights
1933	busy
1934	unavailable
1935	unwillingToPerform
1936	loopDetect
1937-193F	(reserved)
1946	(reserved)
1948-194F	(reserved)
1950	other
1951-195A	(reserved)

12 Appendix

12.1 Function combination matrix (Windows)

			Paper Source					Finishing															
											Staple					Punch			Folding			
			Auto	Tray1, 2, 3, 4	LCC	LCT	Manual Feed	Uncollated	Collated	Sorted	Off	Corner	Long Edge	Short Edge	Center	Off	Long Edge	Short Edge	Off	Z-Fold	Half Folding	Crease
Paper Source	Auto			×	×	×	×	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
	Tray1, 2, 3, 4		×		×	×	×	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	×	❍	❍
	LCC		×	×		×	×	❍	❍	❍	❍	❍	❍	×	×	❍	❍	×	❍	×	×	×
	LCT		×	×	×		×	❍	❍	❍	❍	❍	❍	●	●	❍	❍	●	❍	×	×	●
	Manual Feed		×	×	×	×		❍	❍	❍	❍	△	△	△	△	❍	△	△	❍	×	△	△
Printer Specific Options	Uncollated		❍	❍	❍	❍	❍		×	❍	❍	×	×	×	×	❍	❍	❍	❍	❍	❍	❍
	Collated		❍	❍	❍	❍	❍	×		×	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
	Sorted		❍	❍	❍	❍	❍	❍	×		❍	×	×	×	×	❍	❍	❍	❍	❍	❍	❍
	Staple	Off	❍	❍	❍	❍	❍	❍	❍	❍		×	×	×	×	❍	❍	❍	❍	❍	❍	❍
		Corner	❍	❍	❍	❍	△	×	❍	×	×		×	×	×	❍	❍	❍	❍	❍	×	×
		Long Edge	❍	❍	❍	❍	△	×	❍	×	×	×		×	×	❍	❍	×	❍	❍	❍	×
		Short Edge	❍	❍	×	●	△	×	❍	×	×	×	×		×	❍	×	❍	❍	×	×	×
		Center	❍	❍	×	●	△	×	❍	×	×	×	×	×		❍	×	×	❍	×	×	❍
	Punch	Off	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍		×	×	❍	❍	❍	❍
		Long Edge	❍	❍	❍	❍	△	❍	❍	❍	❍	❍	❍	×	×	×		×	❍	❍	❍	×
		Short Edge	❍	❍	×	●	△	❍	❍	❍	❍	❍	×	❍	×	×	×		❍	×	×	×
	Folding	Off	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍		×	×	×
		Z-Fold	❍	×	×	×	×	❍	❍	❍	❍	❍	❍	×	×	❍	❍	×	×		×	×
		Half Folding	❍	❍	×	×	△	❍	❍	❍	❍	×	×	×	×	❍	×	×	×	×		×
		Crease	❍	❍	×	●	△	❍	❍	❍	❍	×	×	×	❍	❍	×	×	×	×	×	
Layout	1-sided 1up		❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
	2-sided 1up		❍	❍	❍	❍	△	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	×	❍
	1-sided 2, 4, 6, 9, 16up		❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
	2-sided 2, 4, 6, 9, 16up		❍	❍	❍	❍	△	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	×	❍
	Scaling		❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
	Booklet		❍	❍	❍	❍	△	×	❍	×	❍	×	×	×	❍	❍	×	×	❍	×	×	A
Distribution Number			❍	❍	❍	❍	❍	×	❍	×	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Watermark			❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
OHP Interleaving			×	×	×	×	❍	❍	❍	❍	❍	×	×	×	×	❍	×	×	❍	×	×	×
Cover mode			×	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	×	×	❍

			Layout									
			1-sided 1up	2-sided 1up	1-sided 2, 4, 6, 9, 16up	2-sided 2, 4, 6, 9, 16up	Scale	Booklet	Distribution Number	Watermark	OHP Interleaving	Cover mode
Paper Source	Auto		❍	❍	❍	❍	❍	❍	❍	❍	×	×
	Tray1, 2, 3, 4		❍	❍	❍	❍	❍	❍	❍	❍	×	❍
	LCC		❍	❍	❍	❍	❍	❍	❍	❍	×	❍
	LCT		❍	❍	❍	❍	❍	❍	❍	❍	×	❍
	Manual Feed		❍	△	❍	△	❍	△	❍	❍	❍	❍
Printer Specific Options	Uncollated		❍	❍	❍	❍	❍	×	×	❍	❍	❍
	Collated		❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
	Sorted		❍	❍	❍	❍	❍	×	×	❍	❍	❍
	Staple	Off	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
		Corner	❍	❍	❍	❍	❍	×	❍	❍	×	❍
		Long Edge	❍	❍	❍	❍	❍	×	❍	❍	×	❍
		Short Edge	❍	❍	❍	❍	❍	×	❍	❍	×	❍
		Center	❍	❍	❍	❍	❍	❍	❍	❍	×	❍
	Punch	Off	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
		Long Edge	❍	❍	❍	❍	❍	×	❍	❍	×	❍
		Short Edge	❍	❍	❍	❍	❍	×	❍	❍	×	❍
	Folding	Off	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
		Z-Fold	❍	❍	❍	❍	❍	×	❍	❍	×	×
		Half Folding	❍	×	❍	×	❍	×	❍	❍	×	×
		Crease	❍	❍	❍	❍	❍	A	❍	❍	×	❍
Layout	1-sided 1up			×	×	×	×	❍	❍	❍	❍	❍
	2-sided 1up		×		×	×	×	×	❍	❍	×	❍
	1-sided 2, 4, 6, 9, 16up		×	×		×	×	×	❍	❍	❍	❍
	2-sided 2, 4, 6, 9, 16up		×	×	×		×	×	❍	❍	×	❍
	Scale		×	×	×	×		×	❍	❍	❍	❍
	Booklet		❍	×	×	×	×		❍	❍	×	❍
Distribution Number			❍	❍	❍	❍	❍	❍		❍	×	❍
Watermark			❍	❍	❍	❍	❍	❍	❍		❍	❍
OHP Interleaving			❍	×	❍	×	❍	×	×	❍		×
Cover mode			❍	❍	❍	❍	❍	❍	❍	❍	×	

❍ : The combination is possible.
× : The combination is impossible. (The settings made are rejected.)
● : Cannot be used if the LCT rejects loading of paper in the lengthwise direction.
△ : Does not function if special paper setting has been made.
A : Can be set on the PS driver, but not on the PCL driver.

Note
Some combinations may not function properly depending on the size and direction of the paper.

12.2 Function combination matrix (Macintosh)

			Paper Source					Printer Specific Options																
												Staple					Punch			Folding			
			Auto	Tray1, 2, 3, 4	LCC	LCT	Manual Feed	Uncollated	Collated	Sorted	Off	Corner	Long Edge	Short Edge	Center	Off	Long Edge	Short Edge	Off	Z-Fold	Half Folding	Crease
Paper Source	Auto			×	×	×	×	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
	Tray1, 2, 3, 4		×		×	×	×	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	×	❍	❍
	LCC		×	×		×	×	❍	❍	❍	❍	❍	❍	×	×	❍	❍	×	❍	×	×	×
	LCT		×	×	×		×	❍	❍	❍	❍	❍	❍	●	●	❍	❍	●	❍	×	×	●
	Manual Feed		×	×	×	×		❍	❍	❍	❍	△	△	△	△	❍	△	△	❍	×	△	△
Printer Specific Options	Uncollated		❍	❍	❍	❍	❍		×	❍	❍	×	×	×	×	❍	❍	❍	❍	❍	❍	❍
	Collated		❍	❍	❍	❍	❍	×		×	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
	Sorted		❍	❍	❍	❍	❍	❍	×		❍	×	×	×	×	❍	❍	❍	❍	❍	❍	❍
	Staple	Off	❍	❍	❍	❍	❍	❍	❍	❍		×	×	×	×	❍	❍	❍	❍	❍	❍	❍
		Corner	❍	❍	❍	❍	△	×	❍	×	×		×	×	×	❍	❍	❍	❍	❍	×	×
		Long Edge	❍	❍	❍	❍	△	×	❍	×	×	×		×	×	❍	❍	×	❍	❍	×	×
		Short Edge	❍	❍	×	●	△	×	❍	×	×	×	×		×	❍	×	❍	❍	×	×	×
		Center	❍	❍	×	●	△	×	❍	×	×	×	×	×		❍	×	×	❍	×	×	❍
	Punch	Off	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍		×	×	❍	❍	❍	❍
		Long Edge	❍	❍	❍	❍	△	❍	❍	❍	❍	❍	❍	×	×	×		×	❍	❍	×	×
		Short Edge	❍	❍	×	●	△	❍	❍	❍	❍	❍	×	❍	×	×	×		❍	×	×	×
	Folding	Off	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍		×	×	×
		Z-Fold	❍	×	×	×	×	❍	❍	❍	❍	❍	❍	×	×	❍	❍	×	×		×	×
		Half Folding	❍	❍	×	×	△	❍	❍	❍	❍	×	×	×	×	❍	×	×	×	×		×
		Crease	❍	❍	×	●	△	❍	❍	❍	❍	×	×	×	❍	❍	×	×	×	×	×	
	OHP Interleaving		×	×	×	×	❍	❍	❍	❍	❍	×	×	×	×	❍	×	×	❍	×	×	×
	Cover mode		×	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	×	×	❍
Layout	1-sided 1up		❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
	2-sided 1up		❍	❍	❍	❍	△	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	×	❍
	1-sided 2, 4, 6, 9, 16up		❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
	2-sided 2, 4, 6, 9, 16up		❍	❍	❍	❍	△	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	×	❍
	Scale		❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

					Layout				
			OHP Interleaving	Cover mode	1-sided 1up	2-sided 1up	1-sided 2, 4, 6, 9, 16up	2-sided 2, 4, 6, 9, 16up	Scale
Paper Source	Auto		×	×	❍	❍	❍	❍	❍
	Tray1, 2, 3, 4		×	❍	❍	❍	❍	❍	❍
	LCC		×	❍	❍	❍	❍	❍	❍
	LCT		×	❍	❍	❍	❍	❍	❍
	Manual Feed		❍	❍	❍	△	❍	△	❍
Printer Specific Options	Uncollated		❍	❍	❍	❍	❍	❍	❍
	Collated		❍	❍	❍	❍	❍	❍	❍
	Sorted		❍	❍	❍	❍	❍	❍	❍
	Staple	Off	❍	❍	❍	❍	❍	❍	❍
		Corner	×	❍	❍	❍	❍	❍	❍
		Long Edge	×	❍	❍	❍	❍	❍	❍
		Short Edge	×	❍	❍	❍	❍	❍	❍
		Center	×	❍	❍	❍	❍	❍	❍
	Punch	Off	❍	❍	❍	❍	❍	❍	❍
		Long Edge	×	❍	❍	❍	❍	❍	❍
		Short Edge	×	❍	❍	❍	❍	❍	❍
	Folding	Off	❍	❍	❍	❍	❍	❍	❍
		Z-Fold	×	❍	❍	❍	❍	❍	❍
		Half Folding	×	×	❍	×	❍	×	❍
		Crease	×	❍	❍	❍	❍	❍	❍
	OHP Interleaving			×	❍	×	×	×	❍
	Cover mode		×		❍	❍	❍	❍	❍
Layout	1-sided 1up		❍	❍		×	×	×	×
	2-sided 1up		×	❍	×		×	×	×
	1-sided 2, 4, 6, 9, 16up		❍	❍	×	×		×	×
	2-sided 2, 4, 6, 9, 16up		×	❍	×	×	×		×
	Scale		❍	❍	×	×	×	×	

❍ : The combination is possible.

× : The combination is impossible. (The settings made are rejected.)

● : Cannot be used if the LCT rejects loading of paper in the lengthwise direction.

△ : Does not function if special paper setting has been made.

Note

Some combinations may not function properly depending on the size and direction of the paper.

Tip

1Side and 2Side of Layout mean the following.
1Side: Duplex Print = Off
2Side: Duplex Print = Short Edge or Long Edge

12.3 Function combination matrix (Linux)

			Paper Source					Finishing																
											Staple					Punch			Folding			
			Auto	Tray1, 2, 3, 4	LCC	LCT	Manual Feed	Uncollated	Collated	Sorted	Off	Corner	Long Edge	Short Edge	Center	Off	Long Edge	Short Edge	Off	Z-Fold	Half Folding	Crease
Paper Source	Auto			×	×	×	×	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
	Tray1, 2, 3, 4		×		×	×	×	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	×	❍	❍
	LCC		×	×		×	×	❍	❍	❍	❍	❍	❍	×	×	❍	❍	×	❍	×	❍	×
	LCT		×	×	×		×	❍	❍	❍	❍	❍	❍	●	●	❍	❍	●	❍	×	×	●
	Manual Feed		×	×	×	×		❍	❍	❍	❍	△	△	△	△	❍	△	△	❍	×	△	△
Printer Specific Options	Uncollated		❍	❍	❍	❍	❍		×	❍	❍	×	×	×	×	❍	❍	❍	❍	❍	❍	❍
	Collated		❍	❍	❍	❍	❍	×		×	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
	Sorted		❍	❍	❍	❍	❍	❍	×		❍	×	×	×	×	❍	❍	❍	❍	❍	❍	❍
	Staple	Off	❍	❍	❍	❍	❍	❍	❍	❍		×	×	×	×	❍	❍	❍	❍	❍	❍	❍
		Corner	❍	❍	❍	❍	△	×	❍	×	×		×	×	×	❍	❍	❍	❍	❍	×	×
		Long Edge	❍	❍	❍	❍	△	×	❍	×	×	×		×	×	❍	❍	×	❍	❍	×	×
		Short Edge	❍	❍	×	●	△	×	❍	×	×	×	×		×	❍	×	❍	❍	×	×	×
		Center	❍	❍	×	●	△	×	❍	×	×	×	×	×		❍	×	×	❍	×	×	❍
	Punch	Off	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍		×	×	❍	❍	❍	❍
		Long Edge	❍	❍	❍	❍	△	❍	❍	❍	❍	❍	❍	×	×	×		×	❍	❍	×	×
		Short Edge	❍	❍	×	●	△	❍	❍	❍	❍	❍	×	❍	×	×	×		❍	×	×	×
	Folding	Off	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍		×	×	×
		Z-Fold	❍	×	×	×	×	❍	❍	❍	❍	❍	❍	×	×	❍	❍	×	×		×	×
		Half Folding	❍	❍	×	×	△	❍	❍	❍	❍	×	×	×	×	❍	×	×	×	×		×
		Crease	❍	❍	×	●	△	❍	❍	❍	❍	×	×	×	❍	❍	×	×	×	×	×	
Duplex	Long Edge Binding		❍	❍	❍	❍	△	❍	❍	❍	❍	❍	❍	×	❍	❍	❍	×	❍	❍	×	❍
	Short Edge Binding		❍	❍	❍	❍	△	❍	❍	❍	❍	❍	×	❍	❍	❍	×	❍	❍	×	×	❍
Distribution Number			❍	❍	❍	❍	❍	×	❍	×	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
OHP Interleaving			×	×	×	×	❍	❍	×	❍	❍	×	×	×	×	❍	×	×	❍	×	×	×
Cover mode			×	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	×	×	❍

			Duplex				
			Long Edge Binding	Short Edge Binding	Distribution Number	OHP Interleaving	Cover mode
Paper Source	Auto		❍	❍	❍	×	×
	Tray1, 2, 3, 4		❍	❍	❍	×	❍
	LCC		❍	❍	❍	×	❍
	LCT		❍	❍	❍	×	❍
	Manual Feed		△	△	❍	❍	❍
Printer Specific Options	Uncollated		❍	❍	×	❍	❍
	Collated		❍	❍	❍	×	❍
	Sorted		❍	❍	×	❍	❍
	Staple	Off	❍	❍	❍	❍	❍
		Corner	❍	❍	❍	×	❍
		Long Edge	❍	×	❍	×	❍
		Short Edge	×	❍	❍	×	❍
		Center	❍	❍	❍	×	❍
	Punch	Off	❍	❍	❍	❍	❍
		Long Edge	❍	×	❍	×	❍
		Short Edge	×	❍	❍	×	❍
	Folding	Off	❍	❍	❍	❍	❍
		Z-Fold	❍	×	❍	×	×
		Half Folding	×	×	❍	×	×
		Crease	❍	❍	❍	×	❍
Duplex	Long Edge Binding			×	❍	×	❍
	Short Edge Binding		×		❍	×	❍
Distribution Number			❍	❍		×	❍
OHP Interleaving			×	×	×		×
Cover mode			❍	❍	❍	×	

❍ : The combination is possible.

× : The combination is impossible. (The settings made are rejected.)

● : Cannot be used if the LCT rejects loading of paper in the lengthwise direction.

△ : Does not function if special paper setting has been made.

12.4 Number of registrations

Number of registrations/Usable range for Easy Set

			Windows 95/98		Windows 2000/XP/NT 4.0	
			Registration	Use	Registration	Use
PCL6	Administrator	Printer icon	–	–	• 16/1 driver	❍
		Application	–	–	• 16/1 driver	❍
	Power Users	Printer icon	–	–	×	❍
		Application	–	–	×	❍
	Users	Printer icon	• 16/1 driver	❍	×	❍
		Application	• 16/1 driver	❍	×	❍
PS	Administrator	Printer icon	–	–	• 32/1 driver	❍
		Application	–	–	×	❍
	Power Users	Printer icon	–	–	• 32/1 driver	❍
		Application	–	–	×	❍
	Users	Printer icon	• 32/1 driver	❍	×	❍
		Application	×	❍	×	❍

Number of registrations/Usable range for Watermark

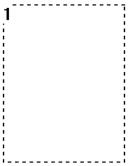
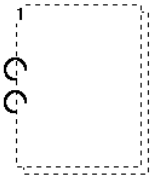
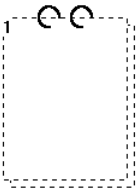
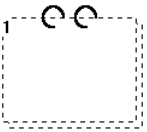
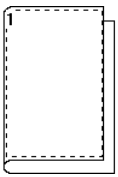
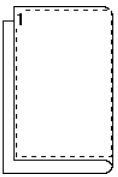
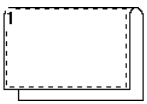
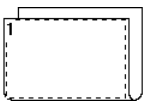
			Windows 95/98		Windows 2000/XP/NT 4.0	
			Registration	Use	Registration	Use
PCL6	Administrator	Printer icon	–	–	• Common: 16 • Personal: 16	• Common • Personal • [All users] Personal
		Application	–	–	• Common: 16 • Personal: 16	• Common • Personal • [All users] Personal
	Power Users	Printer icon	–	–	• Common: 0 • Personal: 16/1 user	• Personal • [Administrator] Common
		Application	–	–	• Common: 0 • Personal: 16/1 user	• Personal • [Administrator] Common
	Users	Printer icon	• 32/1 driver	❍	• Common: 0 • Personal: 16/1 user	• Personal • [Administrator] Common
		Application	• 32/1 driver	❍	• Common: 0 • Personal: 16/1 user	• Personal • [Administrator] Common
PS	Administrator	Printer icon	–	–	• 32/1 driver	❍
		Application	–	–	×	❍
	Power Users	Printer icon	–	–	• 32/1 driver	❍
		Application	–	–	×	❍
	Users	Printer icon	• 32/1 driver	❍	×	❍
		Application	×	❍	×	❍

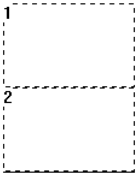
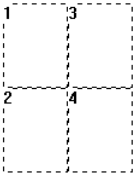
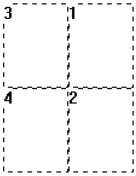
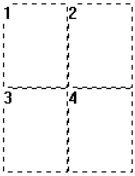
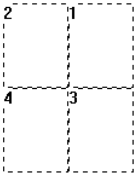
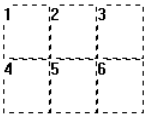
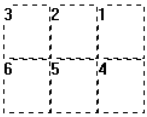
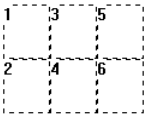
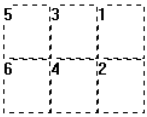
Number of registrations/Usable range for Custom Paper

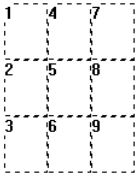
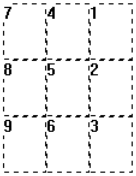
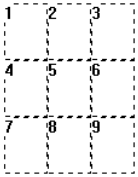
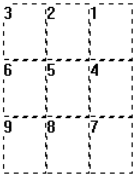
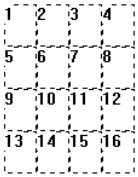
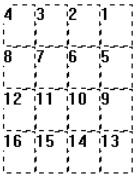
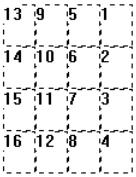
			Windows 95/98		Windows 2000/XP/NT 4.0	
			Registration	Use	Registration	Use
PCL6	Administrator	Printer icon	–	–	• Common: 16 • Personal: 16	• Common • Personal • [All users] Personal
		Application	–	–	• Common: 16 • Personal: 16	• Common • Personal • [All users] Personal
	Power Users	Printer icon	–	–	• Common: 0 • Personal: 16/1 user	• Personal • [Administrator] Common
		Application	–	–	• Common: 0 • Personal: 16/1 user	• Personal • [Administrator] Common
	Users	Printer icon	• 32/1 driver	❍	• Common: 0 • Personal: 16/1 user	• Personal • [Administrator] Common
		Application	• 32/1 driver	❍	• Common: 0 • Personal: 16/1 user	• Personal • [Administrator] Common
PS	Administrator	Printer icon	–	–	• 32/1 driver	❍
		Application	–	–	×	❍
	Power Users	Printer icon	–	–	• 32/1 driver	❍
		Application	–	–	×	❍
	Users	Printer icon	• 32/1 driver	❍	×	❍
		Application	×	❍	×	❍

12.5 Preview Listing

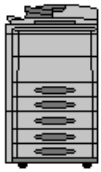
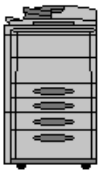
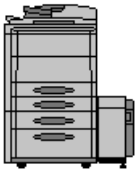
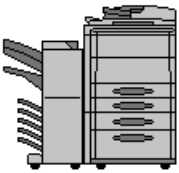
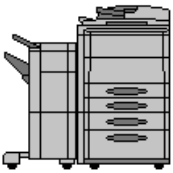
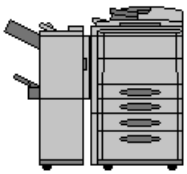
[Page Layout]

Value Defined for Print Setting Item	Screen Specifications	Value Defined for Print Setting Item	Screen Specifications
Orientation= Portrait		Orientation= Landscape	
Duplex/Booklet= Long Edge Binding, Orientation= Portrait		Duplex/Booklet= Short Edge Binding, Orientation= Portrait	
Duplex/Booklet= Short Edge Binding, Orientation= Landscape		Duplex/Booklet= Long Edge Binding, Orientation= Landscape	
Duplex/Booklet= Booklet Left Binding, Orientation= Portrait		Duplex/Booklet= Booklet Right Binding, Orientation= Portrait	
Duplex/Booklet= Booklet Left Binding, Orientation= Landscape		Duplex/Booklet= Booklet Right Binding, Orientation= Landscape	

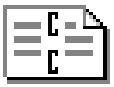
Value Defined for Print Setting Item	Screen Specifications	Value Defined for Print Setting Item	Screen Specifications
N-up=2up, Orientation= Portrait		N-up=2up, Orientation= Landscape	
N-up=4up, Orientation= Portrait, PageLocation= Vert. Ascending		N-up=4up, Orientation= Portrait, PageLocation= Vert. Descending	
N-up=4up, Orientation= Portrait, PageLocation= Horiz. Ascending		N-up=4up, Orientation= Portrait, PageLocation= Horiz. Descending	
N-up=6up, Orientation= Portrait, PageLocation= Horiz. Ascending		N-up=6up, Orientation= Portrait, PageLocation= Horiz. Descending	
N-up=6up, Orientation= Portrait, PageLocation= Vert. Ascending		N-up=6up, Orientation= Portrait, PageLocation= Vert. Descending	

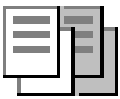
Value Defined for Print Setting Item	Screen Specifications	Value Defined for Print Setting Item	Screen Specifications
N-up=9up, Orientation= Portrait, PageLocation= Vert. Ascending		N-up=9up, Orientation= Portrait, PageLocation= Vert. Descending	
N-up=9up, Orientation= Portrait, PageLocation= Horiz. Ascending		N-up=9up, Orientation= Portrait, PageLocation= Horiz. Descending	
N-up=16up, Orientation= Portrait, PageLocation= Horiz. Ascending		N-up=16up, Orientation= Portrait, PageLocation= Horiz. Descending	
N-up=16up, Orientation= Portrait, PageLocation= Vert. Ascending		N-up=16up, Orientation= Portrait, PageLocation= Vert. Descending	
Watermark			

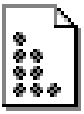
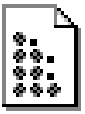
[Printer Figure]

Value Defined for Print Setting Item	Screen Specifications	Value Defined for Print Setting Item	Screen Specifications
No Installed Options		Dup + 2way Tray	
Dup + LCC or Duplex Cabinet		LCT (Dup + LCC)	
Mailbin Finisher (Dup + LCC)		Single-Staple Finisher or Multi-Staple Finisher (Dup + LCC)	
Folding Finisher (Dup + LCC)			

[Setting Preview]

	Value Defined for Print Setting Item	Screen Specifications	Value Defined for Print Setting Item	Screen Specifications
Duplex/Booklet	Short Edge Binding		Long Edge Binding	
	Booklet Left Binding		Booklet Right Binding	
Detail of Output Setting (Staple)	Corner Staple		Center	
	Long Edge		Short Edge	
Detail of Output Setting (Punch)	Long Edge		Short Edge	

	Value Defined for Print Setting Item	Screen Specifications	Value Defined for Print Setting Item	Screen Specifications
Detail of Output Setting (Folding)	Justify Output Size [Z-fold]		Half folding	
	Crease			
Collate	Uncollated		Collated	
Sorting	Unsorted		Sorted	
Orientation	Portrait		Landscape	
All Raster	Off		On	

	Value Defined for Print Setting Item	Screen Specifications	Value Defined for Print Setting Item	Screen Specifications
Smoothing	Off		On	

Specifications for the controller

The basic specifications for Pi4700e are given below.

Model Name	: Pi4700e
Type	: Built-in controller
Printer Language	: PCL5e, PCL6, PostScript level 3 Emulation
Print Speed	: Determined by the specifications of the digital copier
CPU	: PowerPC 740 (200 MHz)
ROM	: 8 MB
RAM	: 32 MB (on Board) : Max. 160 MB (DIMM)
Transfer Image Density	: 600 × 600 dpi
Interface (on host)	: Centronics Interface
Networks	: 10/100BaseT (UTP)
Network Protocol	: TCP/IP, IPX/SPX, AppleTalk
Network Management	: To be managed from SNMP-compatible Web browser
Power Requirements	: 5V±5% 5A max, 3.3V±3% 2A max
Power Consumption	: 20W max.
Exterior Dimensions	: Width: 8-5/8 in. (220 mm) × Depth: 12-5/8 in. (320 mm) × Height: 2-3/8 in. (60 mm)
Weight	: 4 lbs. (1.8 kg)
Operating Environment	
Temperature	: 50°F (10°C) to 95°F (35°C)
Humidity	: 15 to 85% RH (no condensation)
Fonts	: PCL5e/PCL6, 80 Adobe PostScript Level 3 Emulation Type 1 font, 136 Symbol Set, 8

Font

PCL font, 80

Courier
CG Times
CG Times Bold
CG Times Italic
CG Times Bold Italic
CG Omega
CG Omega Bold
CG Omega Italic
CG Omega Bold Italic
Coronet
Clarendon Condensed
Univers Medium
Univers Bold
Univers Medium Italic
Univers Bold Italic
Univers Medium Condensed
Univers Bold Condensed
Univers Medium Condensed Italic
Univers Bold Condensed Italic
Antique Olive
Antique Olive Bold
Antique Olive Italic
Garamond Antiqua
Garamond Halbfett
Garamond Kursiv
Garamond Kursiv Halbfett
Marigold
Albertus Medium
Albertus Extra Bold
Arial
Arial Bold
Arial Italic
Arial Bold Italic
Times New Roman
Times New Roman Bold
Times New Roman Italic
Times New Roman Bold Italic
Symbol
Wingdings
ITC Zapf Chancery Medium Italic
Courier Italic
Courier Bold
Courier Bold Italic
Letter Gothic
Letter Gothic Bold
Letter Gothic Italic
ITC Avant Garde Gothic Book
ITC Avant Garde Gothic Book Oblique
ITC Avant Garde Gothic Demi
ITC Avant Garde Gothic Demi Oblique
ITC Bookman Light
ITC Bookman Light Italic
ITC Bookman Demi
ITC Bookman Demi Italic
CourierPS
CourierPS Oblique
CourierPS Bold
CourierPS Bold Oblique
Helvetica
Helvetica Oblique
Helvetica Bold
Helvetica Bold Oblique
Helvetica Narrow
Helvetica Narrow Oblique
Helvetica Narrow Bold
Helvetica Narrow Bold Oblique
New Century Schoolbook Roman
New Century Schoolbook Italic
New Century Schoolbook Bold
New Century Schoolbook Bold Italic
Palatino Roman
Palatino Italic
Palatino Bold
Palatino Bold Italic
SymbolPS
Times Roman
Times Italic
Times Bold
Times Bold Italic
ITC Zapf Dingbats

PostScript font, 136

Albertus MT
Albertus MT Light
Albertus MT Italic
Antique Olive Italic
Antique Olive Bold
Antique Olive Compact
Antique Olive Roman
Arial MT
Arial Italic MT
Arial Bold MT
Arial Bold Italic MT
Avant Garde Book
Avant Garde Book Oblique
Avant Garde Demi
Avant Garde Demi Oblique
Bodoni
Bodoni Italic
Bodoni Bold
Bodoni Bold Italic
Bodoni Poster
Bodoni Poster Compressed
Bookman Demi
Bookman Demi Italic
Bookman Light
Bookman Light Italic
Apple Chancery
Chicago
Clarendon
Clarendon Light
Clarendon Bold
Cooper Black
Cooper Black Italic
Coronet Regular
Courier
Courier Bold
Courier Bold Oblique
Courier Oblique
Eurostile
Eurostile Bold
Eurostile Extended Two
Eurostile Bold Extended Two
Geneva
Gill Sans
Gill Sans Italic
Gill Sans Bold
Gill Sans Bold Italic
Gill Sans Condensed
Gill Sans Bold Condensed
Gill Sans Extra Bold
Gill Sans Light
Gill Sans Light Italic
Goudy
Goudy Italic
Goudy Bold
Goudy Bold Italic
Goudy Extra Bold
Helvetica
Helvetica Bold
Helvetica Bold Oblique
Helvetica Oblique
Helvetica Condensed
Helvetica Condensed Oblique
Helvetica Condensed Bold
Helvetica Condensed Bold Oblique
Helvetica Narrow
Helvetica Narrow Bold
Helvetica Narrow Bold Oblique
Helvetica Narrow Oblique
Hoefler Text Regular
Hoefler Text Italic
Hoefler Text Black
Hoefler Text Black Italic
Joanna MT
Joanna MT Italic
Joanna MT Bold
Joanna MT Bold Italic

Letter Gothic
Letter Gothic Slanted
Letter Gothic Bold
Letter Gothic Bold Slanted
Lubalin Graph Book
Lubalin Graph Book Oblique
Lubalin Graph Demi
Lubalin Graph Demi Oblique
Marigold
Monaco
Mona Lisa Recut
New York
New Century Schlbook Bold
New Century Schlbook Bold Italic
New Century Schlbook Italic
New Century Schlbook Roman
Optima
Optima Italic
Optima Bold
Optima Bold Italic
Oxford
Palatino Roman
Palatino Italic
Palatino Bold
Palatino Bold Italic
Stempel Garamond Roman
Stempel Garamond Italic
Stempel Garamond Bold
Stempel Garamond Bold Italic
Symbol
Times Roman
Times Italic
Times Bold
Times Bold Italic
Times New Roman MT
Times New Roman Italic MT
Times New Roman Bold MT
Times New Roman Bold Italic MT
Univers
Univers Oblique
Univers Bold
Univers Bold Oblique
Univers Condensed
Univers Condensed Oblique
Univers Condensed Bold
Univers Condensed Bold Oblique
Univers Light
Univers Light Oblique
Univers Extended
Univers Extended Oblique
Univers Bold Extended
Univers Bold Extended Oblique
Zapf Chancery Medium Italic
Zapf Dingbats
Wingdings
Candid (emulates Carta)
Taffy (emulates Takton)
Copperplate Gothic ThirtyTwo BC
Copperplate Gothic ThirtyThree BC
Hoefler Text Ornaments

Symbol Sets

No.	Symbol Set Name
1	Roman 8
2	PC-8
3	PC-8 D/N
4	IBM 850
5	ECMA Latin 1
6	Legal
7	Latin 2
8	Latin 5

Selectable Paper Sizes

Letter / 11 × 17 / 11 × 14 / Legal / Invoice

Executive / A6 / A5 / A4 / A3 / B6 / B5 / B4

FLS1 / FLS2 / FLS3 / FLS4

Accessories

Pi4700e Quick Start Guide

Printer Driver (CD-ROM) for Pi4700e Controller

Glossary

10BASE-T

A network data transfer standard established by the IEEE. The network uses a twisted-pair cable carrying 10 megabits per second (10Mbps).

100BASE-T

A network data transfer standard established by the IEEE. The network uses a twisted-pair cable carrying 100 megabits per second (Mbps).

application

A software program that performs a particular function, such as generating graphics or spreadsheets.

click

To press and release a mouse button quickly. Often used to select an object. SEE double-click.

control panel

A bank of indicators that show the current status of the printer.
Panel buttons that are located on the control panel make it possible to perform a variety of different operations.

dialog box

A box that appears in order for the user to input information or settings required for the printer to operate.

double-click

Pressing a mouse button twice in quick succession while keeping the mouse in place. Often used to open a dialog or enable a function. SEE click.

display

A visual output device of a computer.

resolution

The fineness of detail of the output print, expressed in the number of dots per inch (dpi, or dots per inch). Higher resolution produces text and graphics with greater sharpness and fineness of detail, but results in a greater amount of data involved.

EtherTalk

The AppleTalk protocol supporting Ethernet. It allows Macintosh users to use the Ethernet.

font

A complete set of characters in a given typeface and style. The size of characters is specified in points (1/72 inches).
Typeface is the distinctive design of types, such as gothic, while style is an ornament, such as italic.

halftone

Gradations of tones expressed by means of varying densities of dots.

hard disk drive

A device that is contained in a computer and peripheral equipment and used to save data and files.
In the printer controller, it is used to save fonts downloaded from the computer. Its data is retained even when the main power is turned OFF.

Stores the Scan to HDD data.

icon

A graphic image on the screen that represents an element.

interface

A standard that governs the ways for two different systems to exchange information. It specifies the format of data to be transmitted, communications protocols, and physical configurations for connection.

IPX/SPX

The communications protocols used by NetWare.

landscape (paper orientation)

A horizontal print orientation, in which printing is oriented so that the long edges of a sheet of paper are on top and bottom.

local printer

The printer that is directly connected to the computer being used. A printer connected to a network is called the remote printer.

memory

The place in a computer where data can be stored and retrieved. The amount of data stored is expressed in bytes. Memory can either be RAM or ROM. Generally, the data stored in RAM is lost when power is turned OFF, while that in ROM is retained even when power is turned OFF, but cannot be rewritten.

Network Interface Card (NIC)

An optional card to which network interface can be added, used for connecting a printer to network environment.

offline

The state of the printer controller, in which it does not receive data or execute any processing.

online

The state of the printer controller, in which it is capable of receiving data and processing jobs.

operation system

A program or group of programs that control the functions of the computer and its peripheral devices such as the printer.

parallel interface

A type of standards that govern the ways for two different systems to exchange information, in which multiple bits are transmitted at one time. Because of that, synchronization is necessary, which makes the scheme not right for data transmission over a long distance. The most common parallel interface is Centronics.

port

A connector through which data is exchanged between a computer and peripheral equipment.
The parallel port permits multiple-bit data to be transmitted at one time, commonly used in printers. The serial port is generally used to connect a modem or other device.

portrait (paper orientation)

A vertical print orientation, in which printing is oriented so that the short edges of a sheet of paper are on top and bottom.

PostScript font

A scalable outline font standard, widely adopted in the printing industry. By downloading PostScript fonts in a PostScript-compatible printer, it is possible to produce smoother letters than bit-mapped fonts can.

PostScript printer software

The program that is used on the computer to enable printing on PostScript printers.

printer driver

Software that enables controlling printer operations.

print job

A single batch of job for printing specified at one time from an application. It may be directly transmitted to the printer, or temporarily stored in a print queue.

print manager

An application that manages the print queue and print files.

resolution

See dpi.

SIMM

An acronym for Single In-line Memory Module.

TCP/IP

The standard data transfer protocol over the Internet. Data is transferred by breaking up data messages into packets, to which IP addresses are attached.

TrueType font

A soft font standard the system has. TrueType is a font technology that ensures that the printed output is identical to what you see on-screen. It is also scalable, capable of producing characters in varying sizes.

gray scale

The method of representing color data on a monochrome device by approximating the data with shades of gray (halftone).

paper

The medium on which the printer can print data. Varieties include OHP transparencies, labels, letterhead, and postcards, in addition to plain paper and recycled paper.

12.6 UNIX Configuration

Printing is possible with this Network Card by using the LPD/LPR commands, which are general commands in the following UNIX system.

For details on creating print data in UNIX, refer to your UNIX system administrator.

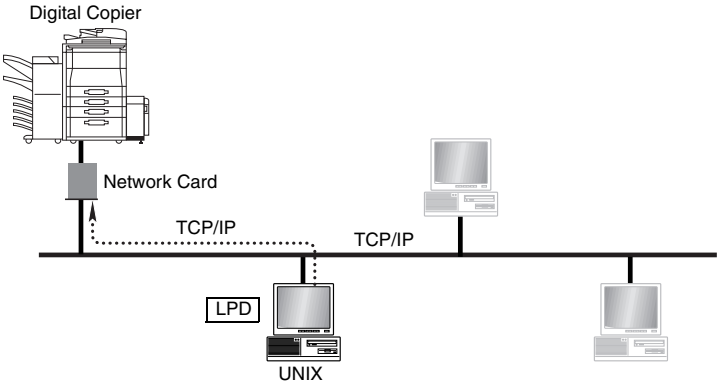
Note
Only PostScript or text files can be printed from UNIX.

- All UNIX systems supporting lpd/lpr
- System V Rel.4 (386 Platform)
- DEC ULTRIX RISC Versions 4.3, 4.4
- DEC OSF/1 Versions 2.0, 3.0
- Solaris
  Version 1.1.3 (SunOS 4.1.3)
  Version 2.3 (SunOS 5.3)
  Versions 2.4, 2.5
- HP-UX 700, 800 Series
  Versions 9.01, 10.0
- IBM AIX Version 3.2.5
- SCO UNIX Version 3.2
- AS/400

Either of the two connection configurations described below can be used.

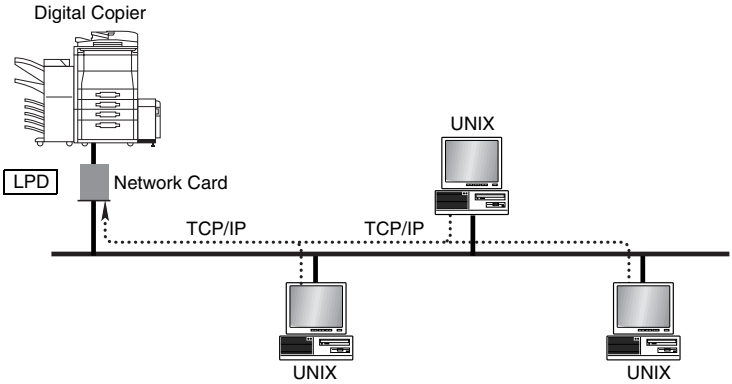
Host-based lpd

In this configuration, a supplied line printer daemon is run on one or more workstations and print data is sent to the Network Card via a TCP/IP port.



Printer-based lpd

In this configuration, the printer appears as a host running a line printer daemon.



Generally, printer-based lpd is easiest to use on BSD UNIX systems that require an entry in the printcap file once the Network Card has its IP information. Some UNIX System V systems place restrictions on support of remote lpr/lpd printers, requiring that the host-based lpr/lpd approach be used.

On many UNIX systems, you can choose between host-resident printing or print server-resident printing. The following shows the differences between the two types of printing.

Item	Host-resident	Print server-resident
Banner Page	• User name and file name are printed on the banner page.	• Host name printed on the banner page.
lpd Installation	• lpd must be installed on every host computer used for printing.	• Single installation of lpd when print server is installed.

Note

The Network Card also operates with other host-resident print supervisor/spooler programs that provide a print image to the printer over a TCP/IP port. The base TCP/IP port number can be changed using Telnet, MAP, or a Web browser. The actual port is always one higher than the base port number. The status page shows the actual port number.

With both the host-based and printer-based lpd, you must assign IP parameters to the Network Card. See “12.7 Setting Up IP Parameters” (p. 12-53) for more information.

Printer-based lpd Configuration

lpd/lpr is an implementation of the standard UNIX line printer daemon. It lets you print across a TCP/IP network without needing to install software on your workstation. All filtering and banners are done by the Network Card. Remote printing uses the same commands (lpr, lpq, lpc) as local printing.

An lpr request from a workstation references the remote (rm) entry in the **/etc/printcap** file, where it finds the printer on a remote system. lpr opens a connection with the network lpd/lpr process on the remote system, and sends the data file to the remote printer. The printer-based lpd then filters the data and prints the job in accordance with information contained in the control file and its own printcap file.

The Network Card lpd recognizes the format of certain printer emulations and filters the data, if possible, so it can be printed on the printer type you specify. Either of the following two methods can be used to inform the Network Card lpd of what type of printer is connected.

1. Using the default port setting (PCL, PostScript, etc.)
2. Using Telnet or the Network Card HTML settings page to change the listed emulation types (Network Card HTML settings page can be accessed using MAP or a Web browser.)

The following sections describe how to give specific lpd/lpr setup instructions for various systems.

BSD System

This section describes how to set up a remote printer on the host that sends jobs to the Network Card using printer resident lpd. This is accomplished by adding an entry to the host's **/etc/printcap** file for each printer you use.

1 Use an editor to open **/etc/printcap**.

2 Make entries that name the Network Card name as the remote host, and assign any name to the remote printer.
The following is an example of typical printcap entries.

<printer name>:\
(Example: "lprprinter")
:lp=:\
rm=*<remote host>*:\
(Host name from **/etc/hosts**)
:rp=*<remote printer name>*:\
(Any name)
:sd=/usr/spool/lpd/*<printer name>*:
(Specifies spool directory for where the system can spool data and perform other spool control.)

This entry sends jobs spooled in /usr/spool/lpd/*<printer name>* to the printer specified by *<printer name>* for printing by the Network Card specified by *<remote host>*.

3 Create the spooling directory.

mkdir /usr/spool/lpd/<printer name>

4 Use the lpr command to print something.

lpr -P<printer name> <file name>

Installation is complete if the file you specify prints correctly.

AIX Version 2.5

This section describes how to set up a remote printer on the host that sends jobs to the Network Card using the Network Card's lpd.

1 At the prompt, type:

```
#smit spooler
```

2 On the window that appears, select **Manage Remote Printers**.

3 On the menu, select **Client Services**.

4 On the next menu, select **Remote Printer Queues**.

5 On the next menu, select **Add a Remote Queue**.

6 Change the values on the window that appears to the settings for the Network Card.
The values that first appear on the window are initial defaults. You must replace the short and long form filter values with the values shown below.

Item	Example	Input Data Description
Name of queue to add	`print1`	Local printer name
queue Destination Host	`printfast`	Network Card IP address
Short Form Filter	`/usr/lpd/bsdshort`	Required value
Long Form Filter	`/usr/lpd/bsdlong`	Required value
Name of remote printer queue	`PORT1`	Network Card queue (You can use any name you want here.)
Queue Name of device to add	`print1`	Local queue name

7 After inputting all the values you want, press Enter to complete the configuration.

AIX 4.0

Use the following procedure to install a Network Card on an AIX 4.0 system.

1 Run SMIT Printer.

2 Select **Print Spooling**.

3 Select **Add a Print Queue**.

4 Select **Remote**.

5 Use **Standard Processing**.

6 Assign the queue name.

7 Use the Network Card host address for Remote System.

8 Assign an appropriate name (like **PORT1**) for the queue on the remote system.

9 Type in a description of the printer. This information is optional.

10 Press Enter to apply what you have input and create the queue.

11 Execute the following command to produce a test print.

```
lp -d<queue name> <file name>
```

Configuration complete if the test prints without any problems.

HP-UX

Use the following procedure to set up a remote computer on the host that sends jobs to a Network Card using Network Card lpd.

1 At the prompt, type:

```
sam
```

2 On the window that appears, select **Printer/Plotter Manager**.

3 On the menu, select **List printer and plotters**.

4 On the list that appears, select **Actions** from the title bar and then select **Add Remote Printer** on the menu that appears.

5 Type the appropriate Network Card values on the window that appears.

The following table shows some sample settings.

Item	Example	Input Data Description
Printer Name	myprinter	Name used in the lp command
Remote System Name	fastprint	Network Card host name recorded in /etc/hosts
Remote printer Name	PORT1	lpd queue name (You can use any name you want here.)

6 From the three settings at the bottom of the window, select **Remote Printer is on BSD System**.

7 Click **OK**.

8 Ping the Network Card to check the connection.
`ping <Network Card IP address>`

When ping causes the message shown below to return, it means the IP address is setup correctly.
`<Network Card IP address> is alive.`

AS/400

When working with the output queue description (WORKOUTQD), you must provide information for a number of fields in order to allow the Network Card to function properly as a remote printer device.

1 When prompted for the remote system, type **INTNETADR** so the AS/400 system recognizes the device as an IP device.

2 Input an appropriate name (like **PORT1**) for the remote printer queue name.

3 **Connection type** must be **IP**.

4 **Internet address** must be the Network Card IP address.

5 **Destination Type** must be **OTHER**.

6 In response to the message asking if you want to convert SCS to ASCII, type **YES**.
This tells the AS/400 system to convert text.

7 For **Manufacturer type and model**, specify the printer driver that comes with the printer controller.

DEC ULTRIX 4.3 RISC, OSF1/ALPHA

Use the following procedure to set up a remote printer on the host that sends jobs to a Network Card.

1 At the prompt, type:

`lprsetup`

2 Select **add**.

3 Type a printer name and then press Enter.

4 When the following message appears, press Enter.
"Do you want more information on specific printer types?"

5 This displays a list of printers supported by ULTRIX. Type the following:

`remote` Enter

6 Type the printer synonym (alias) and then press Enter.

7 Specify the spooler directory and then press Enter.
If you want to use the default spooler directory shown on the screen, press Enter without inputting anything.

8 Specify the remote system name and then press Enter.

9 Type an appropriate name (like **PORT1**) for the remote system printer, and then press Enter.

10 From the list that appears on the display, select the printcap symbol name. Next, type the following.

Q Enter

11 This displays the configuration. If it is correct, type **Y**. If something is wrong, type **N**.

The following table shows some sample settings.

Item	Type	Input Data Description
lp (line printer)	STR	
rm (remote host)	STR	`Network Card host name`
rp (remote printer)	STR	`PORT1 (You can use any name you want here.)`
sd (spooler directory)	STR	`/usr/spool/lpd7`

12 Add any comments you want to the printcap file. For example, you could type something like the following.

Dick's printer is down the hall.

13 Select **exit** to save your settings and then press [Enter] to complete the procedure.

SCO UNIX

Use the following procedure to set up a remote printer on the host that sends jobs to a Network Card using lpd.

1 At the prompt, type:

```
mkdev rlp
```

...

Note

You cannot run mkdev rlp twice. To add another printer, use the rlpconf command.

2 Type the responses shown below for the questions that appear.

Do you want to install or remove a remote printer?
Type: **I**

3 Do you want to change printer description file /etc/printcap?
Type: **Y**

4 Write a printer name.
Type the name of the printer.
Example: **lprprinter1**

5 Is lprprinter1 a remote printer or a local printer?
Type: **R**

6 Enter remote host name.
Type the Network Card host name recorded in the printcap file.
Example: **lprprinter**

7 Confirm the information you have entered.
Type: **Y**

8 Confirm the preceding connection as your system default.
Type: **Y**

9 Enter another printer name or quit setup.
Type: **Q**

10 Do you want to start the remote daemon now?
Type: **Y**

11 Use a line editor to open the **/etc/printcap** file and replace the **:rp=** entry with the appropriate remote queue name. The following shows an example of how this is done when the remote port is named PORT1.

```
printer1:\
:lp=:\
```
(This field is used for specification of the local printer device name. This field must be left empty.)
```
:rm=lprpriter:\
```
(Network Card host name recorded in **/etc/hosts**)
```
:rp=PORT1:\
```
(Any remote queue name you want)
```
:sd=/usr/spool/lpd/printer1:
```
(Name of spool directory on client)

System V Release 4, Solaris 2.x

You can use lpd/lpr if your system recognizes the LPSYSTEM command is available. Settings can also be made using admintool if the system supports it.

LPSYSTEM Installation

...

Note
The following procedure must be performed from the Bourne Shell.

1 At the prompt, type:

```
lpsystem -t bsd <Network Card host name recorded in
/etc/hosts>
```
Some systems require input of the remote host IP address instead of the remote host name.

2 Type the following command:

```
lpadmin -p <local printer name> -s <Network Card
host name>!<remote queue name>
```

Note
Do not input a space after the remote host name.

```
Enable <local printer name>
Accept <local printer name>
```

Linux

With Red Hat Print System Manager, you can configure the printer on a graphical setup screen. See *Configuring the Printer Using the printtool Command* for more information.

If your system does not have Red Hat Print System Manager installed, you can configure the printer by editing the contents of the /etc/printcap file. See *Configuring the Printer by Editing the printcap File* for more information.

Configuring the Printer Using the printtool Command

1 Start x terminal.

2 At the command prompt, enter the **printtool** command. This causes the **Red Hat Print System Manager** window to appear.

3 Click the **Add** button.

This causes the **Add Printer Entry** window to appear.

4 Choose **Remote Unix (lpd) Queue** and click **OK**.

This causes the **Edit Remote Unix Queue Entry** window to appear.

5 Specify the printer name.

6 Select or add the spool directory (typically, /usr/spool/lpd/*<printer name>*)

7 In the **Remote Host** field, specify the IP address of the Print Server Card.

8 In the **Remote Queue** field, specify **PORT1**.

9 Optionally, specify an input filter.

10 When you finish, click **OK**.

11 Restart the daemon by choosing **lpd** → **Restart lpd** in the Print Server Manager.

Configuring the Printer by Editing the printcap File

1 Use an editor to open **/etc/printcap**.

2 Make entries that name the Network Card name as the remote host, and assign any name to the remote printer.
The following is an example of typical printcap entries.

`<printer name>:\`
(Example: “lprprinter”)
`:lp=:\`
`:rm=<remote host>:\`
(Host name from **/etc/hosts**)
`:rp=<remote printer name>:\`
(Any name)
`:sd=/usr/spool/lpd/<printer name>:`
(Specifies spool directory for where the system can spool data and perform other spool control.)

This entry sends jobs spooled in /usr/spool/lpd/*<printer name>* to the printer specified by *<printer name>* for printing by the Network Card specified by *<remote host>*.

3 Create the spooling directory.

```
mkdir /usr/spool/lpd/<printer name>
```

4 Shut down and restart the lpd daemon.

5 Use the lpr command to print something.

```
lpr -P<printer name> <file name>
```

Installation is complete if the file you specify prints correctly.

Host-based lpd Configuration

You need the CD-ROM that comes bundled with the printer controller to use host-based lpd. It contains install scripts for various types of UNIX. This section describes how to install TCP/IP printing to the Network Card on any of the operating systems listed below.

- DEC ULTRIX 4.3 RISC
- System V Release 4
- Solaris (Version 1.x, 2.x)
- SCO UNIX
- OSF1/ALPHA
- IBM/AIX
- HP-UX

Once the Network Card has its IP parameters loaded, you must perform the following steps to enable host-based TCP/IP printing.

1 Load the print server software on your workstation. This software is provided as a tar file in the TCP/IP directory.

2 Run the appropriate installation script, if one is available.

3 Complete the configuration of your operating system.

Loading the Program

The following procedures are necessary only when using the supplied host-based lpr. You do not need to load the software if you are using printer-based lpr.

1 Log in as superuser to the system that spools directly to the print server.

2 Load the CD-ROM that comes with the printer controller into the CD-ROM drive of the computer you want to use.

3 Create a program installation directory and copy the program to it. For example, type the following.

```
mkdir /usr/MLT_install
```

...

Note

If you already have a Network Card printer at your site and you are now installing another one, delete the files in the installation directory (not /usr/nic). If these files remain, they can prevent the installation of a subsequent print server.

4 Use the tar command to load the software from the CD-ROM. At this time the system displays a list of Network Card files copied by tar.

5 Run the installation script for your system in accordance with appropriate procedure below.

Selecting Filters

There are a number of options available when executing the script for each type of system.

When you run an installation script, it first asks if the printer is a PostScript printer. If you reply **no** to this question, the install script uses an input filter (infilter) that performs CR/LF translation for printing of ASCII files on a PCL printer. If you reply **yes**, the printcap file references psfilter, which provides easy ASCII-to-PostScript conversion.

Normal PostScript format files are not affected. Proprietary and public domain filters are also available for more versatile filtering capabilities.

Selecting a Filter Manually

The Network Card comes with an input filter named *psfilter*, and an output filter named *psbanner* for printing of PostScript banners. To use these filters, you must change the infilter (**:if=**) and outfilter (**:of=**) entries in **/etc/printcap**. The following shows an example of how this is done.

```
<printer name> | Print Server Card printer:\
    :lp=/dev/nic/<printer name>:\
    :if=/usr/nic/psfilter:\
    :of=/usr/nic/psbanner:\
    :sd=/usr/spool/<printer name>:
```

Solaris Version 1, OSF1

1 Type the following to run the installation script:
`nicinst`

The script automatically downloads the appropriate Network Card utilities for your system and displays questions to prompt you for the information it needs.

2 What is the node name of the Print Server Unit?

Input the host name recorded in **/etc/hosts**. For example, type **printfast** and then press Enter.

3 What is the printer name?

Type the printer name and press Enter.

4 Here, the script displays the information you have input up to this point.

```
Node name of the Print Server Card: printfast
Printer name to be used: <printer name>
The printer is attached on: PORT 1
```

Check these settings and make sure they are correct. If they are correct, type **yes** and press Enter. Otherwise, type **no** and press Enter.

5 Is this printer PostScript?

Type **yes** and press Enter if the printer is a PostScript printer. Otherwise type **no** and press Enter.

6 The printcap entries you have made up to this point appear on the display and the script confirms whether you want the entries written into the **/etc/printcap** file. Type **yes** if you want the entries added to printcap and then press Enter. If you do not want them added, type **no**, press Enter and then manually make the required changes to the entries.
Do not change the device name in the **/etc/printcap** file, which was given to the Network Card in step 3. The lp command line must reference the **:lp** entry recorded in the printcap file. The following shows an example entry.

```
<printer name> | Print Server Card printer:\
:lp=/dev/<printer name>:\
:if=/usr/nic/infilter:\
:sd=/usr/spool/<printer name>:
```

* All printcap entries start with a tab except for the first.

7 The script creates a spool directory in **/usr/spool** and starts a daemon for the newly configured printer. At this time, the script displays the path you should use if you ever need to restart the daemon.

Example:

```
/usr/nic/lpr_print /dev/nic/<printer name> print-
fast 10001 &
```

8 Run the ps command to view all your lpd/lpr processes.

```
ps -ax | grep lpd
```

9 Next, input the following to kill all your lpd/lpr processes.
`kill -9 <Process ID>`

This stops all printing.

10 Next, type the following to restart the daemon.

`/usr/lib/lpd`

11 This completes installation. In response to the message about whether you want to install another printer, input **yes** or **no** and then press Enter.

Ping the Network Card to test communication.

DEC ULTRIX 4.3

1 Type the following to run the installation script:
`nicinst`

The script automatically downloads the appropriate Network Card utilities for your system and displays questions to prompt you for the information it needs.

2 What is the node name of the Print Server Unit?
Input the host name recorded in **/etc/hosts**. For example, type **printfast** and then press Enter.

3 What is the printer name?

Type the printer name and press Enter.

4 Here, the script displays the information you have input up to this point.
```
Node name of the Print Server Card: printfast
Printer name to be used: <printer name>
The printer is attached on: PORT 1
```

Check these settings and make sure they are correct. If they are correct, type **yes** and press Enter. Otherwise, type **no** and press Enter.

5 Is this printer PostScript?

Type **yes** and press Enter if the printer is a PostScript printer. Otherwise type **no** and press Enter.

6 The printcap entries you have made up to this point appear on the display and the script confirms whether you want the entries written into the **/etc/printcap** file. Type **yes** if you want the entries added to printcap and then press [Enter]. If you do not want them added, type **no**, press [Enter] and then manually make the required changes to the entries.

```
<printer name> | Print Server Card printer:\
:lp=/dev/<printer name>:\
:if=/usr/nic/infilter:\
:sd=/usr/spool/<printer name>:
```

7 This completes the installation. In response to the message about whether you want to install another printer, input **yes** or **no** and then press [Enter].

Like all BSD systems, ULTRIX uses the **/etc/printcap** file to configure a printer. The interface to the installation script is the same for all BSD systems, but the printcap entry is different.

HP-UX System

1 Type the following command to run the installation script.
`nicinst`

The script automatically downloads the appropriate Network Card utilities for your system and displays questions to prompt you for the information it needs.

2 What is the node name of the Print Server Unit?
Type the host name recorded in **/etc/hosts**. For example, type **printfast** and then press [Enter].

3 What is the printer name?
Type the printer name and press [Enter].

4 Here, the script displays the information you have input up to this point.

```
Node name of the Print Server Card: printfast
Printer name to be used: <printer name>
The printer is attached on: PORT 1
```

Check these settings and make sure they are correct. If they are correct, type **yes** and press [Enter]. Otherwise, type **no** and press [Enter].

5 The script automatically starts the daemon for the newly configured printer. At this time, the script displays the path you should use if you ever need to restart the daemon.

Example:

```
/usr/nic/lpr_print /dev/nic/<printer name> print-
fast 10001 &
```

The above example reflects the name supplied to the script earlier.

After the installation script is complete, you must then configure the printer and make it known to the lp system. The HP-UX lp system uses the lpadmin command used to configure a printer. There is no **/etc/printcap** file. The following are the commands used for printer configuration.

```
lpadmin -p <printer name> -v /dev/nic/<printer name>

enable <printer name>

accept <printer name>
```

You can also use other options in the lpadmin command. See your system documentation for details.

Note

The printer name must be the same as the one you specified during Network Card installation. HP also provides the sam program, which can be used to configure the printer.

If you use sam, make all specifications just as if the printer were connected directly to /dev/lprinter/*<printer name>*.

The software installed with your HP system should be sufficient to satisfy most printing needs. HP supplies ASCII-to-PostScript filters that are invoked automatically whenever PostScript is specified as the content type. The HP-UX lp system also supplies interface scripts that generate PostScript banners. When necessary, you can use the lpfilter command to define new filters and content types. The installation provides you with the full power and flexibility of the lp print service, and the fact that you are printing across the network is totally transparent.

System V (Solaris Version 2), System V Release 4/386 Base Machine

System V Solaris and SVR4 i386 base machines use a network direct filter called *nicfilter*. The system invokes nicfilter directly from the printer interface file. To load the software, create a **/usr/nic** directory and then tar the TCP/IP software into it.

1 Type the following to navigate to the **/usr/nic** directory.

```
cd /usr/nic
```

2 Next, type the following command to run the installation script:
`nicsinst`

Once the operating system is identified, the script downloads the applicable files to the **/usr/nic** directory and displays questions to prompt you for the information it needs.

3 Type:

```
cd /usr/spool/lp/model/standard/usr/nic/
port1_interface
```

Note
*The default interface is generally sufficient for most PostScript, PCL, and ASCII files. To use a printer-specific interface other than the default interface script (named standard), you must have a copy of that printer interface edited and installed in the **/usr/nic** directory.*

4 Next you must edit the printer interface program you created in step 3. Type:

```
cd /usr/nic
```

5 Use a text editor to open and edit the port1_interface file.

6 Search for the expression **FILTER=0**, and insert the following line above or below the section **#FILTER-0${LPCAT}**.

```
FILTER="/usr/nic/infilter | /usr/nic/<nicfilter
print server name> 10001"
```

...

Note

<print serve name> must be the same as the one recorded in /etc/hosts. Optional arguments inserted between the 10001 entry and before the trailing 0 are ${banner}, ${user_name}, ${request_ID}, and ${files}. For details, see the System V Release 4 System Administration Manual.

7 Save the file and quit the editor.

8 You need to use lpadmin to configure the host printer. Type the following:

```
lpadmin -p <printer name> -v /dev/null -i
/usr/nic/port1_interface
```

...

Note

lpadmin configures the printer name and associates it with a given device and printer interface program. There is no /etc/printcap file involved with this method of configuration.

9 Next, initialize the printer. Type the following commands:

```
accept <printer name> Enter
enable <printer name> Enter
```

...

Note

After each entry, lpadmin acknowledges the invoked command.

10 Next, type the following command:

```
lp -d<printer name> /etc/hosts Enter
```

11 Check for output or type the following:

```
lpstat <printer name>
```

Or:

```
lpstat -t
```

SCO UNIX

The installation procedure for SCO UNIX is similar to that for HP-UX. The Network Card solution uses a network direct filter named *nicfilter*. The system invokes nicfilter directly from the printer interface file.

After performing the procedure under *Loading the Program*, you must configure the printer and make it known to the lp system.

1 Type the following to run the installation script:
`nicinst`

The script automatically downloads the appropriate Network Card utilities for your system and displays questions to prompt you for the information it needs.

2 Select your system you are using from the list of options that appears and then press Enter.

```
1) AT&T/SVR4; 386
2) SCO UNIX System V
3) None of the above
```

3 What is the node name of the Network Card?

Input the host name recorded in **/etc/hosts** and then press Enter. For example, type **printfast**.

4 What is the printer name for this Network Card-linked printer?

Type the printer name and press Enter.

5 Here, the script displays the information you have input up to this point.

```
Node name of the Printer Server Card: printfast
Printer name to be used: <printer name>
The printer is attached on: PORT 1
```

Check these settings and make sure they are correct. If they are correct, type **yes** and press Enter. Otherwise, type **no** and press Enter.

6 Is this printer PostScript?

Type **yes** and press Enter if the printer is a PostScript printer. Otherwise type **no** and press Enter.

7 The script automatically starts the daemon for the newly configured printer. At this time, the script displays the path you should use if you ever need to restart the daemon.
`/usr/nic/lpr_print /dev/nic/<printer name> print-fast 10001 &`

The above example reflects the name supplied to the script earlier.

After the installation script is complete, you must configure the printer and make it known to the lp system. The SCO UNIX lp system uses the lpadmin command used to configure a printer. There is no **/etc/printcap** file. The following are the commands used for printer configuration.

`lpadmin -p <printer name> -v /dev/nic/<printer name>`

Note
*Your host may require you to use the **-i** command to specify the model.*

```
enable <printer name>
accept <printer name>
```

You can use other options in the lpadmin command. See your system documentation for full details.

Note
The printer name must be the same as the one you specified during Network Card installation. SCO also provides the sam program, which can be used to configure the printer.

If you use sam, make all specifications just as if the printer were connected directly to /dev/lprinter/*<printer name>*.

The software installed with your SCO system should be sufficient to satisfy most printing needs. SCO supplies ASCII-to-PostScript filters that are invoked automatically whenever PostScript is specified as the content type. The SCO UNIX lp system also supplies interface scripts that generate PostScript banners. When necessary, you can use the lpfilter command to define new filters and content types. The installation provides you with the full power and flexibility of the lp print service, and the fact that you are printing across the network is totally transparent.

AIX RISC System/6000

The AIX printing subsystem is driven by the qdaemon program, which uses data in the **/usr/lpd/qconfig** file to manage queues and route jobs to the proper devices. This information includes entries for each physical virtual printer and physical device known to the system.

Simply stated, an AIX virtual printer is a high-level software view of a data stream, queue, and device that controls how a given job is to be processed. A different virtual printer should be defined for each data stream that is supported by a real printer. Even when PostScript and PCL jobs are destined for the same printer, for example, each job uses a different virtual printer.

Configuring a Network Card printer on an AIX system approximates configuration of a local printer as nearly as possible. The one point where it differs is that the physical device only difference is that the physical device associated with the Network Card printer must be a named pipe used by the print daemon to route data to the Network Card.

The following shows the most straightforward way to add a printer to the system.

1 Type the following to run the installation script:

```
nicinst
```

2 What is the node name of the Print Server Unit?

Input the host name recorded in **/etc/hosts**. For example, type **printfast** and then press Enter.

3 What is the printer name?

Type the printer name and press Enter.

4 Here, the script displays the information you have input up to this point. The following shows example information.

```
Node name of the Print Server Card: printfast
Printer name to be used: <printer name>
The printer is attached on: PORT 1
```

Check these settings and make sure they are correct. If they are correct, type **yes** and press Enter. Otherwise, type **no** and press Enter.

5 Configure a virtual printer using <printer name> as the physical device. For <printer name>, use the same printer name that you specified when installing the printer.

6 Use the following command to shut down qdaemon.

```
stopsrc -s qdaemon
```

7 Edit **/usr/lpd/qconfig** to change the special file for device printername from **/dev/<*printer name*> to /dev/nic/<*printer name*>**.

8 Use the following command to restart the daemon.

```
startsrc -s daemon
```

After this, the installation script creates a named pipe and starts up a print daemon based on the printer name and Network Card information you supplied. The AIX System Management Interface Tool (SMIT) does not accept the named pipe as a printer device, so the install script also creates a null character device in **/dev/<*printer name*>**.

Virtual Printer Commands

Virtual printers can be added using SMIT or by using the mkvirprt command. The device name *printer name* is entered for confirmation purposes. During this process, you also select a particular printer type for the new printer, which inherits the set of predefined attributes for that printer type. The set of attributes is sufficient for most cases, but settings can be changed using SMIT or the chvirprt command. See the AIX RISC System/6000 documentation in cases where a printer requires even more extensive settings.

After adding a virtual printer, a stanza that looks like the following will be in /usr/opf/qconfig for device *printer name*.

```
<printer name>:

file=/dev/<printer name>

backend=/usr/lpd/piobe
```

Edit **file=/dev/<*printer name*>** to **file=/dev/nic/<*printer name*>**. Output spooled on the previously specified virtual printer is sent to the named pipe, and routed to the Network Card. Before editing the files named above, make sure the following daemon is running.

```
/usr/nic/lpr_print /dev/nic/<printer name> printfast
10001 &
```

AIX Print Command

The AIX lp command works slightly differently from other System V Release 4 lp commands. The following lp commands can be used to print files.

```
lp -d<queue name> <file name>
```

Or:

```
lp -d<queue name>:<device name> <file name>
```

12.7 Setting Up IP Parameters

Before you can use TCP/IP for network printing, you must first assign the following IP parameters to the Network Card: IP address, subnet mask, default gateway.

You can use any of the following methods for assigning IP parameters to the Network Card.

Bundled Utility Programs

- Management Access Program (MAP) (Windows) or a Web browser
  See *"8.7 Using the utility software"*
  Note that your computer must have IPX/SPX conversion protocol installed in able to use MAP.
- BOOTP (Windows)
  See *"8.7 Using the utility software"*.

Other Methods

- ARP command (Windows)
  See *"Assigning IP Addresses Using ARP (For Windows)"*.
- ARP command (UNIX)
  See *"Assigning IP Addresses Using ARP (For UNIX)"*.
- BOOTP daemon (UNIX)
  See *"Assigning IP Addresses Using the BOOTP Daemon (For UNIX)"*.
- RARP daemon (UNIX)
  See *"Assigning IP Addresses Using the RARP Daemon (For UNIX)"*.
- DHCP daemon (UNIX)
  See *"Using the DHCP Daemon (For UNIX)"*.

...

Note

If you start up the Digital Copier with its initial factory default setup without assigning a Digital Copier IP address, ATIP (Automatic Temporary IP Address) automatically assigns an IP address and subnet mask. You can use IP address assigned by ATIP to detect the Digital Copier with the MAP utility. To change the current IP address and subnet mask setting, first access the Digital Copier's Web setup page from MAP, and then make the changes you want.

Assigning IP Addresses Using ARP (For Windows)

1 On a computer associated with the same network segment as the Digital Copier, click **Start**, point to **Programs**, and then click **MS-DOS Prompt (Command Prompt)**.

2 Type the command shown below.
`arp -s <IP address assigned to Network Card> <MAC address>`

Example:
Network Card MAC Address: 00:20:6b:aa:bb:cc
IP Address: 192.9.200.200
`arp -s 192.9.200.200 00-20-6b-aa-bb-cc`

This stores the MAC address and IP address data in the cache.

3 Next, type the command shown below.
`ping <IP address assigned to Network Card>`

Example:
IP address assigned to Network Card: 192.9.200.200
`ping 192.9.200.200`

This command sends the IP address to the Network Card. A timeout message is returned until the Network Card recognizes this IP address and restarts.

4 The Network Card waits for auto reset. Otherwise, restart the Digital Copier.

5 After the Network Card restarts, type the command from step 3 again.
`ping <IP address assigned to Network Card>`

Example:
IP Address: 192.9.200.200
`ping 192.9.200.200`

Repeat step 5 until a response is returned. IP address assignment is complete when a response is returned.

...

Note

ARP can be used to assign an IP address only. Other IP parameters must be set using Telnet or a Web browser. For details, see "12.8 Using Telnet to Make Settings" (p. 12-61) and PageScope Light for Pi5501 Operator's Manual.

There are problems with the ARP command in earlier versions of Windows 95, so the command may not function properly if the ARP entry is blank. To check for and prevent such problems, enter the following at the MS-DOS prompt.

```
arp -a
```

If the ARP entry is blank, ping another valid device on the network as shown below.

```
ping <valid IP address for device other than the Network Card>
```

Next, perform the above procedure starting from step 2.

You cannot use ARP to assign an IP address if the Network Card has already been assigned an IP address by ATIP.

Assigning IP Addresses Using ARP (For UNIX)

1 On a computer associated with the same network segment as the Digital Copier, log on as root.

2 Type the command shown below.
`arp -s <IP address assigned to Network Card> <MAC address>`

Example:
Network Card MAC Address: 00:20:6b:aa:bb:cc
IP Address: 192.9.200.200
`arp -s 192.9.200.200 00:20:6b:aa:bb:cc`

This stores the MAC address and IP address data in the cache.

3 Next, type the command shown below.
`ping <IP address assigned to Network Card>`

Example:
IP address assigned to Network Card: 192.9.200.200
`ping 192.9.200.200`

This command sends the IP address to the Network Card. A timeout message is returned until the Network Card recognizes this IP address and restarts.

4 The Network Card waits for auto reset. Otherwise, restart the Digital Copier.

5 After the Network Card restarts, input the command from step 3 again.
`ping <IP address assigned to Network Card>`

Example:
IP Address: 192.9.200.200
`ping 192.9.200.200`

The following response is returned when the IP address is assigned.
`192.9.200.200 is alive`

6 When assignment is complete, type the command below to delete the arp cache entry.
`arp -d <IP address assigned to Network Card>`

Example:
IP Address Assigned to Network Card: 192.9.200.200
`arp -d 192.9.200.200`

Note

When the Network Card host name is already registered in the hosts file (/etc/hosts), you can use the host name in place of the IP address.

Example:

When the entry below is registered in the hosts file.

```
192.9.200.299 printfast
```

```
arp -s printfast 00:20:6b:aa:bb:cc
```

Note

ARP can be used to assign an IP address only. Other IP parameters must be set using Telnet or a Web browser. For details, see "12.8 Using Telnet to Make Settings" (p. 12-61) and PageScope Light for Pi5501 Operator's Manual.

You cannot use ARP to assign an IP address if the Network Card has already been assigned an IP address by ATIP.

Assigning IP Addresses Using the BOOTP Daemon (For UNIX)

1 Power down the Digital Copier.

2 On a computer associated with the same network segment as the Digital Copier, log on as root.

3 If the BOOTP daemon is already running, stop it.

4 Edit **/etc/bootptab** by adding the following.

```
<NIC host name>:\
:ht = <hardware type>:\
:ha = <ethernet Address>:\
:ip = <IP address>:\
:sm = <subnet mask>:\
:gw = <gateway address>:
```

Example:
RFC 1048 Standard
MAC Address: 00:20:6B:AA:BB:CC
IP Address: 192.19.200.200
Subnet Mask: 255.255.255.0
Gateway Address: 192.9.200.10

```
printfast:\
:ht = ether:\
:ha = 00206BAABBCC:\
:ip = 192.9.200.200:\
:sm = 255.255.255.0:\
:gw = 192.9.200.254:
```

Under SCO UNIX, add the following line to activate the BOOTP daemon

```
:vm = rfc1048:
```

5 Start up the BOOTP daemon.

```
bootpd -s
```

6 Power up the Digital Copier.

The Digital Copier initializes, recognizes the IP address, and stores it in non-volatile memory.

7 After the Digital Copier is fully started, power it down again.

8 Power up the Digital Copier again, and use the following command to ping the Network Card.

```
ping <IP address assigned to Network Card>
```

Example:
IP Address: 192.9.200.200

```
ping 192.9.200.200
```

The following response is returned when the IP address is assigned.

```
192.9.200.200 is alive
```

9 After assignment is complete, delete the lines you added to **/etc/bootptasb**. You can also stop the BOOTP daemon.

Note

*When the Network Card host name is already registered in the hosts file (**/etc/hosts**), you can use the host name in place of the IP address.*

You cannot use BOOTP to assign an IP address if the Network Card has already been assigned an IP address by ATIP.

Assigning IP Addresses Using the RARP Daemon (For UNIX)

1 Power down the Digital Copier.

2 On a computer associated with the same network segment as the Digital Copier, log on as root.

3 Edit **/etc/ethers** by adding the Network Card MAC address and the IP address you want to assign.

Example:
MAC Address: 00:20:6B:AA:BB:CC
IP Address: 192.19.200.200
`00:20:6B:AA:BB:CC 192.19.200.200`

4 If the RARP daemon is already running, stop it.

5 Power up the Digital Copier.
The Digital Copier initializes, recognizes the IP address, and stores it in non-volatile memory.

6 After the Digital Copier is fully started, power it down again.

7 Power the Digital Copier back up, and use the following command to ping the Network Card.
`ping <IP address assigned to Network Card>`

Example:
IP Address: 192.9.200.200
`ping 192.9.200.200`

The following response is returned when the IP address is assigned properly.
`192.9.200.200 is alive`

8 After assignment is complete, delete the lines you added to **/etc/ethers**. You can also stop the RARP daemon.

Note

*When the Network Card host name is already registered in the hosts file (**/etc/hosts**), you can use the host name in place of the IP address.*

RARP can be used to assign an IP address only. Other IP parameters must be set using Telnet or a Web browser. For details, see "12.8 Using Telnet to Make Settings" (p. 12-61) and PageScope Light for Pi5501 Operator's Manual.

You cannot use RARP to assign an IP address if the Network Card has already been assigned an IP address by ATIP.

Using the DHCP Daemon (For UNIX)

Under DHCP (Dynamic Host Configuration Protocol), the server automatically provides IP addresses to clients. It is very similar to BOOTP.

This Network Card has an onboard DHCP client. If there is a DHCP server on the network, the DHCP client automatically obtains IP parameters from the server at power up. See *PageScope Light for Pi5501 Operator's Manual* for more information.

12.8 Using Telnet to Make Settings

In addition to the MAP and Web browser combination for making settings, this Network Card also supports use of Telnet for setting up the environment. Network Card settings can be make from a Telnet client platform.

The following settings can be made over a Telnet connection.

- IP parameter changes
- LPD settings
- Protocol changes
- Unit reset
- Factory setting restore
- Password changes

Note

The Network Card must be assigned a valid IP address before you can use a Telnet connection to make settings. Also, the computer you are using for the Telnet connection must have TCP/IP enabled, and must be able to operate as a Telnet client. See "12.7 Setting Up IP Parameters" (p. 12-53) for more information about assigning IP parameters to the Network Card.

Establishing a Telnet Connection

1 Start up the Telnet client.

2 Specify the IP address of the Network Card and connect.

3 At the **login:** prompt, use one of the ID's shown below to log in.

	ID	Password
To check settings:	guest	guest
To change settings:	sysadm	sysadm

4 This displays the Main Menu shown below.

```
The Configuration Utility
Unit Serial no. 460121 V5.04
Main Menu
1. IP Parameters
2. LPD Printers
3. Protocols
4. Reset Unit
5. Restore Factory Defaults
```

6. Change Password
E. Exit

5 Input the number of the menu item you want check, set, or change, and then press [Enter].

Menu Items

IP Parameters

Select this menu item to change the Network Card IP address, subnet mask, default gateway, and base port number. Whenever the Network Card detects that IP parameters have been changed, it automatically starts a soft reset.

Note

The base port number is a number that is one less than the actual TCP/IP port number used by the printer. To set a port number of 10001, for example, you would specify 10000 as the base port number.

The Telnet connection is cut when a soft reset is performed. Because of this, you should make other settings first and leave IP parameter settings until later.

LPD Printers

Select this menu item to specify the emulation (printer interpreter language) supported by the printer. Changing this setting lets you make changes so lpd can print for other emulations.

Protocols

Select this menu item to specify the emulation (printer interpreter language) supported by the printer. You can also disable NetWare or AppleTalk.

Reset Unit

Select this menu item to reset the Network Card. Note that resetting the Network Card initializes the network interface without effecting the printer interface.

Restore Factory Defaults

Select this menu item to restore the Network Card to its initial factory defaults. All of the parameters stored in NVRAM are restored to their initial factory defaults.

Note

Initial factory default values do not take effect until you finish the Telnet session or power the Network Card down and then power it up again.

Change Password

Select this menu item to change the password used for Telnet connection and access to the HTTP server. In response to the **New Password** prompt, type in up to eight characters for the new password and then press Enter. In response to the **Retype New Password** prompt, input the new password again for confirmation, and then press Enter.

Note

The password you specify here is used for both Telnet and Web page access. Changing the password using one type of access (Telnet or a Web browser) also changes the password for the other type of access.

Exiting Telnet (Exit)

Inputting **E** while at Main Menu after changing settings causes the menu shown below to appear.

```
The Configuration Utility

Unit Serial no. 460121 V5.04

Exit

1.  Save Changes and Exit

2.  Save Changes and Reset

3.  Exit Without Saving Changes
```

Select **1** to save your changes without applying them.

Select **2** to save your changes and reset the Network Card, which applies the changes.

Select **3** to discard your changes.

12.9 FTP Printing

Use the following procedure for using FTP (File Transfer Protocol) to print.

1 Start up the FTP client and look into the Network Card using the following setting.

Host Name:<*NIC IP address*>
Login Name:port1
Password:port1

2 Upload (PUT) the file you want to print.

3 The printer prints the uploaded (PUT) file.

...

Note

FTP Printing does not support selecting multiple file names.

Only one person can be logged on to a port at any particular time.

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